An Address

ON

MENTAL DISORDERS DEPENDENT ON TOXÆMIA.

Delivered before the Medico-Psychological Society on Nov. 21st, 1900,

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GENTLEMEN,—In addressing a body of experts in a special department of medicine such as now forms my auditory I might claim some indulgence for one who has to teach the whole subject of medicine. I will confess, however, that when I accepted with some diffidence the invitation of your honorary general secretary to undertake this duty I did so in order that I might venture to address you from the standpoint of general medicine, as one unconnected with any special department of it, and who regards your particular work as an important branch of our great art. The title of your association indicates that you acknowledge the fact that the science of psychology has a medical side. It is, of course, possible to be a psychologist without being a physician, and large achievements have accrued to the science at the hands of those who do not pretend to any gifts of healing. You avail yourselves of these, but many of you materially add to the general knowledge of psychology from your studies and observations as alienists. The pure, or non-medical, psychologist is largely indebted to you for your researches. He may contribute to the study of mental evolution, while you lay bare pregnant facts relating to cerebral dissolution, for these, alas, you have daily experience of. In setting myself to the task of this address my thoughts naturally reverted to the days when I had the privilege of attending Professor Laycock's lectures on Medical Psychology at Edinburgh. These prelections were much in advance of their time and were the utterances of one of the shrewdest and most far-thinking men of his day. We were perhaps too young to appreciate them fully, but they were eminently suggestive and afforded a splendid groundwork on which, at all events, some of his pupils have since reared solid and enduring structures. At that time this instruction was by some derided as unfit to form part of a medical curriculum, but such was not the view of those who considered that an academic training constituted something better than an ordinary curriculum. With these lectures were combined regular visits to various asylums for the insane, and so the training was thorough and practical. At that time the brain as an organ was only beginning to be studied otherwise than as a mass of nervous matter with sundry prominent and depressed portions whose names were difficult and sesquipedalian. Broca was at work, and Fritsch and Hitzig, followed by Laycock's pupil Ferrier, were soon in the field, and opening out for us the vistas which we readily see to-day in contemplating cerebral centres and functions. In this new aspect it is profoundly interesting to find that the prescience of Laycock had predetermined not a little of that which exact and laborious research came to reveal eventually in respect of function and localisation.

You know better than I how much more has since been accomplished in these directions by our own countrymen, such as Schäfer, Horsley and Beevor, Risien Russell, Mott, and others, to say nothing of the achievements of foreign investigators. The unknown and unexplored cerebral dark continent has now been mapped out and closely surveyed; what was, as it were, an untracked and undefined ocean is now sounded and charted and the bearings of many headlands have been duly taken. All is not yet done, however, albeit the work grows more complete; many investigators are still engaged upon it, and we can feel without doubt that among the wonders of the twentieth century the survey will be achieved and the minute anatomy and precise physiology of the whole nervous mass of the body made known. Let us try to imagine what Harvey, Hunter, Willis, Abercrombie, Bernard, and Connolly, with many others, would have thought of this in their day.

Regarded from the purely anatomical and physiological side of its nature we may venture to ask ourselves whether we be possibly over-engrossed just now with the studies which thus relate to the material structure and function of the brain, and somewhat apt to forget or to neglect some of those higher and mysterious problems which attach to it as an organ of mind and the dwelling place of the immortal spirit of man. Doubtless such considerations more occupied the thoughts of our predecessors at a time when a minute study of the brain such as is possible to-day was undreamed of. As a body we of the medical art have often been regarded as given over to materialism. I have always felt that such a stigma was unjust, and attributed it to the narrowness and self-sufficiency of ecclesiastics who quailed before the manifestations of God's laws as exposed by science, and who could not bring themselves to accept anything that controverted their inflexible dogmatism. Such problems as I refer to are not merely for the contemplation of the theologian or the psychologist, for they must enlist the interest of every rational man, and certainly cannot be disregarded by the alienist who studies, and ministers to, the distempered mind. To the thoughtful physician the human brain is not as the heart or the liver or the kidney, an organ whose mechanism is merely appropriate for specific animal functions. It is, indeed, as marvellously adapted for its work as any of these, but that work is more varied, more subtle, and more commanding than that of any other in the body. We do not now seek to localise in it the seat of the soul, as did our predecessors. We are content with the belief that in some inscrutable way the organ of mind and intellect is possessed by an unseen and intangible power, a divine essence, we will term it, which, implanted in it from the first stirrings of life,[1] and having capacity for infinite development, brings it into relation with the worlds unseen and only retires from its intimate tissue as the vital force ebbs out to assume a fresh and, as we hope, a better environment.

Respecting the relation of the material and spiritual in the human body, "the Church," as Canon Gore kindly informs me, has fortunately never made any dogmatic pronouncement. I say fortunately, for if it had made such a pronouncement in ancient or mediæval times with their false physiology they would certainly have made it wrong. On the other hand, early Christian psychology, as in Tertullian, is very interesting because it insists on the unity of the human personality and protests against the subdivision of man into separate

[1] "Man became a living soul."—Gen. ii. 7.

"This is the instrument of God's masterpiece—the human soul. Over these nodes and fissures it floated, like the spirit of God over the face of the deep. Here, as on a beautiful instrument, the spirit touched the keys and thought, like music, came forth; and here were impressed indelibly ideas of the vast universe without, of time, and eternity; yea, even of the Infinite and Transcendent—of God. Hushed in the silence of prayer here the soul brooded as a dove above its nest, and here in moments of temptation and repentance it argued, reasoned, prayed, implored the inferior powers that rebelled or recanted beneath. With what sublime majesty it ruled and swayed the subjects that owned its imperial dominion, and how it touched heaven on the one hand for pity and earth on the other in power! And when the turbulent passions raged and stormed it soothed and quelled their rebellion; and then in recompense to itself it went out and up towards the celestials and joined its emancipated sisters before the great white throne, and drank in peace and the blessedness of calm from the silence and worship of Heaven. Where is that soul now? Whither has it gone? Silent is the instrument just crumbling to inevitable decay. But where in the boundless ocean of space is the deathless spirit that once ruled it in majesty and drew from it music whose echoes roll through eternity? And how has silence mapped and parcelled it like a dead planet. Here is the 'island of Reil,' here the 'pons Varolii,' here is the arbor vitæ, and here is the subarachnoid space, and here that wonderful contrivance of the great Designer that regulates the arterial supplies. I lift my hat reverentially and whisper 'Laudate!'"—"My New Curate" (A Story gathered from the Leaves of an Old Diary), Rev. P. A. Sheehan, Boston, 1900, P.P. of Doneraile, Co. Cork.

"The physician sees in the body of man the material structure by which alone the known operations of the mind of man are possible in this world; the organs by which alone he can work his earthly work, whether it be the work which he shares in common with the beast of the field or the work through which he can enter into conscious relation to his unapproachable Creator; the frame by which, while bound down in an earthly charnel-house, he lifts his eyes and strains his heart with yearning ineffable towards a higher nature and obeys the upward tending of impulses of affections strong unto death—affections so pure and so divine as to lose in the love of others even the consciousness of self."—Address on "The General Relations of Medicine in Modern Times," Sir Henry W. Acland, Oxford, 1868.

faculties—intellect, emotions, &c.—as if they were so many separate entities. I mean, it is interesting to see that Christianity intensified the sense of the unity of the human person—body, soul, and spirit. Tertullian asserts, against some Greek thinkers, that the "anima"—the vital principle or personality—is, while manifested in its faculties, none the less one. It thinks in feeling and feels in thinking. It is the same that wills or loves or is indignant or thinks—"Eadem quae perinde per corpus corporalia sentiat, quaemadmodum per animum incorporalia intelligat, salvo eo, ut etiam sentiat dum intelligit. Non essim et sentire intelligere est, et intelligere sentire est? ..... Quis mihi exhibebit sensum non intelligentem quod sentit, aut intellectum non sentientem quod intelligit?" (De Anima. Cap. VIII.) "Atque secundum officium operis sui variis nuncupatur nominibus: anima est, dum vivificat; dum contemplatur, spiritus est; dum sentit, sensus est; dum sapit, animus est; dum intelligit, mens est; dum consentit, voluntas est; dum discernit, ratio est; dum recordatur, memoria est. Non tamen haec ita dividuntur in substantia sicut in nominibus; quia haec omnia una est anima." (Alcuin, "De Ratione Animae," 149.) This, one may say, is consistently the Christian view—that the person is one, with many faculties. In other words, the soul is πολλῶν ὀνομάτων μορφὴ μία.

A consideration of the characters and endowments of human cortical brain-cells and ganglia must ever excite our wonder and admiration. Amongst these we note their strange differentiation from their embryonic companions in the epiblast, the absence in them of secretive and reproductive functions, and the relative large size of their nuclei, those centres of nerve energy, invested with the power of storing, distributing, and regulating nerve force.[1] We know of no specialisation in function elsewhere in the body to compare with this, and beyond it we find the further endowments of psychical force and the capacity for the retention of memory.

For us, then, the cortical brain cells must take the first place of honour, and constitute the headstones of the temple of the body of man. Here, in the laminations of the grey matter, is the instrument of conscious mind, and in their intimate tissues lie the nerve and ganglion cells with their neurons whose structures afford the essential basis of all your special studies. We may regard other organs and viscera of the body from a more material side if we care to do so, but in the presence of a brain we are arrested by the thought that something immaterial had dwelt there which though independent of, yet had its interaction with, the vital energy which animated every individual cell and fibre of it. Human thought can project itself no further here and the scientific imagination may not penetrate this mystery. We can but regard this problem with the eye of faith and the assurance of a good hope, and re-trace our steps to contemplate the brain as the organ of mind and will. Our first consideration may surely be to recognise the fact that the majority of human beings are born into the world with well-formed and healthy brains. We may safely concede this in spite of the opinion that has been expressed to the effect that "most men are fools" and while recognising the varying degrees of brain power and mental capacity that exist even in members of civilised communities. This appears the more remarkable when we remember what serious defects result from minor flaws and limited morbid lesions in certain parts of the brain. It is astounding to realise that the histologist can in no way distinguish the physical characters pertaining respectively to the brain matter of a philosopher or a cow-herd, and yet how vastly different the endowments of each, both presumably sane and healthy. The brain, the organ of mind, is only healthy if its thinking parts work in harmonious and physiological order, and this relates essentially to a perfect nutrition and a normal cellular metabolism. There may be a sufficient supply of blood conveyed by healthy arteries, but that supply may be inadequate in quality or deficient in essentials for perfect nutrition. Again, it may be inappropriate by reason of something positively harmful contained in it. An altered metabolism occurs and the result is delirium or mental aberration. Were a necropsy possible in such a case there would almost certainly be nothing gross or macroscopical to reveal the nature of it. An ordinary examination of the brains of the insane has not seldom in the past been void of obvious lessons to the pathologist. Even now, when definite lesions are found, they are generally to be attributed to degenerations, which may be senile, even if prematurely so, or they are presumably dependent on chronic vascular congestion. An ordinary necropsy in cases of acute mania and of melancholia commonly reveals nothing abnormal. Grosser changes in the skull-cap and membranes, with hyperplasia of connective tissue, may be witnessed in cases of chronic insanity, and occasionally an acid reaction of the cerebro-spinal fluid. The most important lesions to be met with, however, are only detectable by a careful histological examination. Alterations in brain-cell function are found to be associated with what is now known as chromatolysis in which degeneration of the cell-plasm and finally of the nuclei occurs. This may be partial or very extensively diffused, and thus whole systems of neurons may become involved, their processes breaking off from the cell-body and degenerating. Mere naked-eye inspection does not reveal these intimate alterations, and till lately these minute alterations have been withheld from our observation. Hence it has hitherto often been difficult to realise what we now recognise as a fact that mental insanity is the result of brain disease. The probability is that we are now only gradually arriving at the *vera causa* of this and some other morbid states by the employment of new methods relating to the intimate metabolism of the tissues concerned, the chemical reactions which exist between the cell and its environment, and the environment and the cell. In this direction light may not improbably be shed on some of the problems which still puzzle the alienist. Our knowledge is now fairly complete respecting the grosser morbid changes affecting the brain and its investments, and we regard them as we do those of other organs, tracing the lesions to the elementary tissues in which they began; but we now require the services of the physiologist and chemist to carry on the studies respecting cellular dystrophies and the interactions of the intimate tissues of all parts of the body, for these studies, I may remark, are not strictly clinical.

Mental health must surely be dependent on the integrity of the brain-cells and neurons. Psychic endowment, no less than ordinary nerve energy, requires a normal condition of the machinery for its functions. The nuclei of the myriad cells[2] as physiological centres, their plasmic environment, the processes of the cell, their fibres and their collaterals must be intact, and the subtle metabolism at once securing nutrition and dispensing energy may not be disturbed or perverted without manifest disturbance of psychic and ordinary nervous rhythm.

I propose in this address to call your attention to some phases of mental disorder which depend on toxæmic states. These are now differentiated by the alienist, and it is only in recent times that their true nature has been unfolded. They have been long recognised as clinical features of disease, and the sources of them are as varied as are the separate toxic elements which induce them. Progress in physiological chemistry and bacteriology has now furnished us with the means to explain these conditions. The origin of these toxins is at least threefold. They may be generated in the body (auto-intoxicants) or by the malign working of microbes introduced from without, or they may arise by impregnation with organic poisons, or yet again result from the habits of alcoholism, chloralism, cocainism, and morphinism. In the majority of cases of insanity I suppose it will be conceded that there is a hereditary or inborn predisposition to the disorder, an instability or a tendency to this cerebral degeneration which may remain latent until conditions arise which are potent to elicit the break-down.[4] In the class of mental disorders we are now to consider there may or may not be this inherited fault of brain tissue. In many instances of toxic insanity we

[1] "We have no evidence to show that regeneration of nerve cells can take place in the higher vertebrates, but there is some evidence in favour of the view that all the nerve cells of the adult body are present in a rudimentary form at birth."—Dr. Mott, F.R.S., Croonian Lectures, Royal College of Physicians of London, 1900, Lecture I., p. 24.

[2] It has been calculated that there are not fewer than 600,000,000 nerve-cells in the human brain, and these do not multiply after birth.

[4] "Strictly speaking, it is the tendency to nervous disease rather than the disease itself which is inherited. ..... The neuropath may be conceived to possess in some portion of his nervous system communities, groups, and systems of neurons, either of defective durability or with an inherited low potential, readily becoming exhausted, and especially liable to functional depression, and which under the influence of contributory factors, such as toxic conditions of the blood or undue stress, undergo premature degeneration. To explain the inherited neuropathic tendency morphologically we may suppose that there is an inherent defect in the germinal plasm which is concerned in the formation of the neurons."—Dr. Mott, op. cit., Lecture III., p. 113.

have to deal with persons who are already predisposed to mental instability, but in other cases a previously normal brain may be so damaged by toxic influences as to manifest aberration. We have long recognised the toxic effects on the nervous system of the altered metabolism induced by renal inadequacy in Bright's disease in the varied forms of uræmia, in that strange variety of autotoxy due to inability of the hepatic and muscular tissues to hold carbohydrate in reserve, resulting in diabetic coma, and that variety which depends on acute atrophy of the liver. We can now understand how these auto-intoxications act in disturbing the harmony of intimate brain cell metabolism. Their effects are as certain as are those of poisons directly introduced by the mouth or under the skin. The chemical functions of the brain-cell are disordered in precisely the same manner. In the ordinary practice of medicine we are familiar with states of delirium and mental aberration in the course of the various fevers and in pneumonia. Recognising these as infective disorders we now know that we are dealing with the toxic effects of invading parasites, and that amongst the manifold expressions of their presence are nervous or brain symptoms. These are frequent in pneumonia and strangely so when the pulmonary apex is involved. The reason for this is to me inscrutable, and I can only conceive that it results from some special local nervous relations which have hitherto escaped the recognition of the physiologists. With respect both to pneumonia[5] and the various fevers I have to add that a careful inquiry in cases where grave nervous or mental symptoms have supervened has almost always revealed the existence of personal or family neuropathic taint. Puerperal insanity occupies precisely the same position, and inquiries in these cases show that about one-half of them occur in women of neurotic or insane proclivity. Toxic influences naturally affect them more readily and with greater gravity.[6] The insanity of lactation probably owns a different cause and may be attributed to debility and imperfect nutrition, acting probably in many cases upon an originally unstable brain. What has been termed "post-operative insanity," due to infective influence, together with shock or exhaustion, and occurring within a few days after operation, may be similarly classified, although Mr. C. T. Dent is of the opinion that heredity of brain weakness plays but a small part in these cases, and that some of them apparently result from the influences of the anæsthetic agents employed or from iodoform impregnation.

No clearer evidence of the influence of auto-intoxication is afforded than that which results in aberrant cerebration in some cases of gout. The patient generates his own toxin in his tissues and the effects are recognised in the form of stupor, delirium with delusions, and excitement, sometimes as melancholia, such symptoms lasting occasionally for days or for many weeks, and yielding to some overt metastatic gouty development, generally articular, or to an anti-gouty medication, with complete recovery. In enteric, typhus, and rheumatic fevers, erysipelas, cholera, influenza, diphtheria, and scarlet fever we have examples of distinct toxic infections, producing their specific lesions and amongst them damage to cortical brain-cells leading to various grades of mental aberration, some of these ultimately leading to serious results, especially in cases where any predisposition to brain-degeneration or insanity exists. These conditions were brought to the notice of the profession 36 years ago by Sir Herman Weber in a careful paper[7] in which he described the peculiarities of the mental states observed after the crisis had occurred in most of the acute diseases just mentioned. He laid much stress on the condition of shock and collapse which so often accompanies crises and on the associated cardiac debility which doubtless plays a considerable part in the phenomena. The time was not then ripe for the suggestion that toxic influences were concerned. The slow recovery, especially after prolonged attacks, with relapses, of enteric fever is due to the extreme wasting of the body generally and the starvation of brain-cells in particular. I would mention the peculiar loss of speech, or inability to speak, which occurs in some of these cases, several weeks (from five to eight) elapsing sometimes in which not one word is uttered.[8] We may notice a degree of this during the active stage of chorea which I have long distinctly regarded as due to rheumatic toxæmia in the majority of instances and a consequent perverted cortical brain-cell metabolism.[9] Additional proof in support of this view has lately been afforded by the careful researches of Dr. F. J. Poynton and Dr. A. Paine, which have demonstrated apparently the specific diplococcus of true rheumatism.[10]

The malign cerebral distempers due to influenza are very definite and have been well studied in the last epidemics of this plague. We find that all forms of insanity may result from it, and although there is reason to believe that in most instances of their occurrence there is an underlying neurotic proclivity, it is certain that the specific influenzal toxin affects the nervous system very gravely in most cases. According to Dr. John Turner all forms of acute mania are probably of toxic origin, affecting widely-spread areas of brain tissue, and he finds what he considers additional evidence in favour of this view that there is commonly associated in fatal cases a fatty degeneration of the liver.[11] The condition of myxœdema sometimes leads to brain symptoms, such as instability, delusions, mania, and melancholia, the result both in adults, and in the form of sporadic cretinism, of altered metabolism from deficient thyroidal influences. General paralysis is now regarded as coming into the category of auto-intoxications. Syphilis, as its common antecedent, does not, however, provide the toxin, and we must therefore view its part in the etiology as leading to progressive degenerative nervous changes which in turn so modify the intimate metabolism of the tissues as to set free toxic elements. Alcoholic and other excesses are also antecedents in other cases, and sometimes lead impregnation is reckoned as the etiological factor. In cases of juvenile general paralysis congenital syphilis figures to the extent of at least 80 per cent., according to Dr. F. W. Mott, and he regards the malady as essentially due to the effect of syphilis on the germinal plasms of one or both parents. Jaundice as an autotoxic condition is accompanied sometimes by mental depression and hallucinations. I have, however, known xanthopsy to occur without any delusions in catarrhal jaundice.

We may next refer to toxæmic states induced by impregnation of the system with certain organic poisons, of which lead is certainly the most frequent and important source. This subject has been very fully studied. In many cases of saturnine encephalopathy we have to deal with compound conditions the result of possible syphilitic taint, together with chronic alcoholism. The fact that lead impregnation is related to the induction in many cases of gouty manifestations still further complicates the problem, and no less, too, the damaging effect of it on arterial and renal tissues has to be fairly considered in all such instances. The researches of Nissl, Oliver, and Robert Jones and others have now made plain for us the nature of the damage wrought upon the nervous system by this metal. We have to conceive that by degrees a saturation occurs, and chemical changes proceed in the brain and ganglionic cells whereby new compounds are formed within them. We might almost regard these, I think, as a formation of a chemical lead soap or a molecular combination of neural fat with a saturnine base. Again, we have to bear in mind the insoluble salt formed by uric acid with lead. Albeit the changes noted may not always be due to direct chemical influence, for saturnine encephalopathy may occur and no lead be detected in the brain, as shown by Oliver. Like other poisons, lead has a selective power in alighting upon and damaging tissues. Interference with normal metabolism in the cellular plasm, either by direct poisoning or by molecular chemical compounds of a fixed character interfering with function, may well lead to secondary and sclerous changes in the neurons. These, again, may be noxiously affected by freshly formed autotoxins resulting from such impaired cellular nutrition. We are not now concerned with the specific forms of saturnine neuritis which are well ascertained to exist and to produce characteristic symptoms. The whole question of lead encephalopathy is therefore a very complex one. It is, however, certain that many cerebral distempers may issue from it, such as mania, melancholia, dementia with epilepsy, and stupor amounting to coma. Some of these conditions occur after very short exposure to lead impregnation. Whether general paralysis

[5] Cerebral symptoms in pneumonia may be dependent on grosser lesions than those due to brain-cell intoxication, as when pneumococcal meningitis forms part of the disorder.

[6] I am fortified in this opinion by Dr. Savage's experience which affords proof that persons neurotically disposed are more than others vulnerable to the influence of specific infection.

[7] Transactions of the Royal Medical and Chirurgical Society of London, 1865.

[8] St. Bartholomew's Hospital Reports, 1885, vol. xxi., p. 106.

[9] Vide my paper in the Transactions of the Eleventh International Medical Congress at Rome, La Natura Reumatica della Corea, vol. iii., p. 354.

[10] THE LANCET, Sept. 22nd, 1900, p. 861.

[11] Brit. Med. Jour., Sept. 12th, 1900, p. 808.

is ever strictly due to the specific influence of the poison is not yet quite determined. To be certain in the matter one must be able to eliminate the possibility of syphilitic and alcoholic influence. I am disposed to agree with Dr. Savage that saturnine taint is at least capable of inducing this condition and may do so.

With greater frequency than lead impregnation, we have to deal with alcohol as a poison introduced from without. We recognise the abuse of this as an active destroyer of nervous matter and vascular textures, and recent researches plainly indicate the damage done to the brain cells and neurons and the perverse metabolism which is entailed by it. The conditions displayed under the varieties of subacute and acute alcoholism with delusions, mania, epileptiform attacks, and dementia are unfortunately only too familiar to all of us.

Lastly, we have to note the mental aberrations due to the vicious use of agents such as morphine, chloral hydrate, paraldehyde, ether, and cocaine, and to remark concerning all of them that their abuse increases in frequency with what we are pleased to call the advance of knowledge and civilisation. That our profession is in part to blame for some of this mischief I entertain little doubt. The resort to these and similar agents under conditions which hardly justify their employment and which might often be met by other and simpler therapeutic measures has often led to habits of secret intoxication by patients who indulge in them. The frequent handing over of hypodermic syringes and these poisons to nurses is also to be blamed. The too ready sale of such agents by pharmacists and other tradesmen is a matter so serious that it now calls for some special legislation to restrict it. The danger lies in the special seduction of such agents for women and persons with unstable brains, and no care and precaution can be too great in prescribing for them. We are all familiar with the disastrous results of yielding to the cravings for hypnotics and sedatives, and know too well our impotency to do any permanent good in the great majority of such cases. We certainly find that the average patient is singularly intolerant of any pain in these days, and that he clamours for relief at any cost. Our forefathers and foremothers had to suffer more than we do, and I am not sure that they were always the worse for it. They certainly escaped the modern terrors of morphinism, chloralism, and cocainism, and the women of those days bravely endured their catamenial discomforts without recourse to stupefiants. I think a good deal of plainer living and higher thinking would avail much to abolish the too common resort to anodynes which unhappily now prevails so largely in several strata of society both in this and other countries.

In conclusion, we note that the various toxic agents which gain admission to the circulation exercise, as we might expect, their specific actions upon the several tissues of the body and manifest elective affinities for particular systems of neurons. We find in brain diseases, as in other morbid states, that the symptoms are the result not seldom of mixed infections and are not always to be ascribed to any one toxin. There is often, indeed, a vicious circle of conditions, as is well seen in some cases of general paralysis, lead poisoning, and alcoholism, where several factors are clearly combined in the production of the successive phenomena, in such a series as primary cell intoxication, with the result of perverted nutrition and plasmic metabolism, with the production of new toxins—e.g., choline and neurine—and decay of their systems of neurons, the exudation and the subsequent sclerosis on the part of the vessels. The student of morbid cerebral anatomy has now to reckon with all these conditions, and the clinical psychologist has to determine, if he can, the relation of them to the different forms of mental distemper. Those fields of study remain as yet much unexplored, but they are already being occupied by stalwart investigators, amongst whom I will claim a distinguished place for our countrymen Mott and Bevan Lewis. The knowledge already gained respecting the insanity of toxæmia cannot fail to prove useful for the purposes of treatment. We readily recognise how entirely preventable are most of these. Poisoning by lead, syphilis, alcohol, morphine, and fashionable anodynes is certainly preventable. The toxins formerly attendant on surgical interference are now practically abolished, while methods of treatment are gradually coming into use which encourage us to hope that we may overcome, or at least modify, the malign effects of such as induce the several infective diseases. We can now better understand than we did how purgatives and eliminants are often of use in dispersing some forms of mental distemper.

The views which now open out before us in respect of the pathogenic relations of toxæmic insanity would almost appear to justify a return to the older conceptions of humoral pathology. I am not concerned in this matter to take up any particular position dogmatically either as a humoralist or purely neural pathologist. I think that our duty is to find the facts, and then to apply them in building up our pathological doctrines. As time goes on it becomes necessary to keep an open mind and to change our views accordingly as modern research throws light on abstruse points. In the meantime I will venture to suggest that for the conditions we have been considering to-day we may consider them as dominated by a pathological doctrine to which we may fairly apply the term "neuro-humoral." By solid advances of knowledge and by revelations of fresh aspects of truth legitimate medicine alone makes progress. Many of you are now engaged in building up on sure foundations an important part of the great fabric of medicine, and some of us who 30 years ago imagined that small progress was being made with this particular work are now satisfied that it is assuming in your hands stateliness and dignity, and that it no less affords evidence of durability. I repeat that I have ventured to address you to-day from the standpoint of general medicine because general medicine most surely includes your special work. It would be bad for medicine and worse for you were such not the case. Some of us, indeed, could wish we were drawn closer together clinically in our great hospitals where our students commonly see little else than the beginnings or the transitory phases of mental aberration. But we urge them to fill up this gap in their education by attendance on lectures and practice, and in my own school we have full equipment and arrangements for this purpose. Let me add, lastly, that we fully recognise the debt which psychological medicine in this country owes to your association and we regard with full sympathy and interest your energy and your constant progress.

Presidential Address

ON

MOUTH-BREATHING AND ITS RELATION TO DISEASES OF THE THROAT, EAR, NOSE, AND ACCESSORY CAVITIES.

Delivered before the British Laryngological, Rhinological, and Otological Association on Nov. 9th, 1900,

BY MAYO COLLIER, M.S. LOND., F.R.C.S. ENG.,

SENIOR SURGEON TO THE NORTH-WEST LONDON HOSPITAL.

MR. PAST PRESIDENT AND GENTLEMEN,—In acknowledging the honour you have done me by electing me as your President a mingled feeling of satisfaction and anxiety is apparent to me—satisfaction that things have so befallen me that you should consider me worthy to preside over your deliberations and anxiety that the debt I owe you in return may be poorly and inadequately repaid. It is the custom, not only in this society, but in other learned societies, for the incoming president to launch himself into power by delivering a lecture on some important subject connected more or less with the aims and objects of the society over which he presides. It is the first penalty you exact from him in return for the greatness you have bestowed upon him. I assure you this is a penalty not easy to pay. I have chosen a subject to address you on to-day that has aroused, and is likely to arouse, not only in this country but in America and the continent, considerable interest and controversy. It was more or less the subject for special discussion at the recent Ipswich meeting of the British Medical Association and it is a subject that has been discussed and animadverted upon by every degree of intelligence, including the many new recruits to the ever-increasing army of rhinologists and several distinguished members of our sister

society in America, and, strange to say, it has even exercised the mind of a Past President of our own Royal College of Surgeons of England. Without ear-marking or criticising these various opinions I would take the liberty to-day, as your President, of placing before you my personal convictions, the result of a fairly extensive study of this subject for the past 18 years.

The text of my address to you to-day is the relation and bearing of mouth-breathing, or its equivalent nasal obstruction, on affections of the throat, ear, and nose, and accessory cavities, and incidentally I shall touch upon its responsibility for some cases of distortion of the upper jaw and palate and its effect upon the general health. Logic has taught us, and very properly too, not to make use of terms we cannot define. It is on the definition or standard of what is nasal obstruction and what is not that so much difference of opinion exists and so much want of comprehension and negation of fact occurs.

First, I would remind you that the nose is the upper part of the respiratory tract. It is as much an essential part of the respiratory tract as the larynx or trachea. Its proper patency and physiological activity are just as essential to the respiratory function as are the proper patency and physiological activity of the larynx and the trachea. It is the great laboratory for the preparation of the food for the lungs, in the same way as the mouth is the laboratory for the preparation of the food for the stomach. With this preface I pass on to evolve a definition or standard of nasal obstruction. I must ask you, if we are to follow this subject step by step, to go back with me and look at the anatomical condition of things in the normal body and the physics pertaining to these parts when in normal physiological activity. The nasal cavities are surrounded by rigid bony walls and separated from each other by a thin septum, partly cartilaginous and partly bony, into two equal and symmetrical cavities. Each cavity communicates in front *viâ* the external nose with the air and posteriorly each cavity opens into the cloaca of the pharynx and so becomes the highway to the larynx and lungs. If the nose be of no account to respiration surely the mouth would be a larger, easier, and more direct inlet and outlet for the air in its passage to and from the lungs. Why go by the outer circle when the inner circle is shorter, broader, easier, and more direct? The object attained by the air passing through the nose and not through the mouth is to insure its being warmed to close upon 100° F., moistened to saturation, and filtered from all irritating and injurious particles of dust suspended in the atmosphere. And this for very good reasons, for cold air at first contracts the vessels in the respiratory mucous membrane, but subsequently dilatation sets in with accompanying catarrh. Dry air inspissates the mucus in the narrower parts of the respiratory tract and so renders the functions of the ciliated epithelium nugatory, induces collections of inspissated mucus on parts, and so induces coughing to remove the same. The air should be filtered in order to get rid of foreign particles and so lessen the chances of the direct introduction of tubercle and other germs to the lungs.

The normal physiological function of respiration is performed unconsciously and repeated some 20,000 times in the 24 hours. This rapid and frequent filling and emptying of the lungs that follows the expansion and contraction of the chest wall is only rendered possible by maintaining the normal patency of the upper respiratory tract; any obstruction to inspiration would upset the normal frequency of respiration and cause dyspnœa. A normal nasal respiratory tract is one capable of conducting air to the lungs with sufficient rapidity to instantly make up the deficit and equilibrate the lessened tension of the air in the lungs caused by the sudden expansion of the chest cavity. A nasal respiratory tract not capable of supplying air to the lungs day and night at the normal rate of inspiration and without the consciousness of the individual is an abnormal and obstructed nasal respiratory tract and the owner of such may be said to suffer from nasal obstruction. In other words, the necessity of supplementing nasal respiration by oral respiration or mouth-breathing is proof of nasal obstruction. Any evidence of mouth-breathing by day or night, and more especially by night, is evidence of deficient nasal respiration and so evidence of nasal obstruction. Mouth-breathing by day or night is evidence also that the physiological functions of the nose—the warming, the moistening, and the filtering process so admirably performed by the nose—are more or less in abeyance and so lost to the respiratory function.

Depending, as our definition does, on these physiological facts connected with the nose we may logically expect that a case of complete nasal obstruction such as may be caused by polypi on both sides would present one or more of the following symptoms. A nose when thus completely obstructed would be a typical case of mouth-breathing. In the abstract it would be possible to state that, given a person in this condition, certain symptoms of affections of the nose, throat, ears, lungs, and general health would probably supervene. The patient would probably be deaf and might have a discharge from one or both ears. He would have a sense of discomfort and fulness in the nose with at times a copious discharge and marked intermittent headaches. He would probably have marked post-nasal catarrh, some pharyngitis, and cough and dryness of the throat in the morning. Added to this he would be liable to winter cough and bronchitis and more than likely to attacks of asthma. The digestion would probably suffer, and this again would induce a condition of neurasthenia and a feeling of something being wrong. Few of us present would refuse to admit that such a case of nasal obstruction as I have indicated might, and probably would, have one or more or all the symptoms enumerated as a direct result of the mouth-breathing.

Such being the symptoms which we clinically find in mouth-breathers it will be as well at this point to study the underlying physical basis on which they depend. The first question that presents itself is: When the air passes to the lungs *viâ* the mouth and not *viâ* the nose, what is the physical and pathological effect, if any, upon the nasal cavities and nose proper? I am well aware that although the nasal respiratory tract may be quite patent and adequate for normal respiratory purposes that voluntarily one can ignore this passage and breathe entirely by the mouth.

We will, therefore, first study the effect of mouth-breathing on an unobstructed nose. Under these circumstances what is the physical condition of the nasal respiratory passages? or, in other words, what is the effect of short-circuiting the respiratory tract? In the first place, the physiological functions of the nasal mucous membrane are in abeyance and consequently the air passes into the throat, the larynx, and the lungs much in the same condition as that in which it entered the portals of the mouth—that is to say, more or less dry and cold. The pathological effect of this may be, as we have seen, catarrh of the pharynx and larynx associated with cough and other unpleasant conditions. Has the passage of the air to the lungs *viâ* the mouth any other effect? I maintain that it has. It has a physical as well as a pathological effect. The fact that the nose is temporarily put out of gear or in a state of disuse absolves the dilator muscles of the nose from their functions. They no longer dilate during each act of inspiration and there is consequently a tendency of the wings of the nose to collapse. The weakest point is that part not stiffened with cartilage and is opposite the junction of the vestibule with the nasal cavity proper. In mouth-breathers there is a marked pit or depression on the alæ of the nose at this spot. This point may be compared to the rima glottidis in the larynx. It is the narrowest part of the nasal respiratory tract and it is the one most easily obstructed. The interior of the nose may be made quite patent and healthy, and yet collapse of the nose from disuse may remain and cause complete obstruction. The dimple on the outer aspect of the wing of the nose is diagnostic of the condition and pathognomonic of mouth-breathing. Long-continued mouth-breathing or disuse of the nasal respiratory functions begets more or less complete atrophy of the muscles and tissues of the external nose with collapse of the alæ and gives a sharp and pointed expression to the features. I am of opinion, then, that mouth-breathing may induce or cause nasal obstruction from disuse or collapse of the nose valve.

The next proposition is: Does oral respiration or mouth-breathing produce any effect upon the interior of the nasal cavities? Undoubtedly it does. The air on its way to the larynx passes the opening into the naso-pharynx and nasal chambers and according to a well-known law of physics abstracts part of their contents. This, with a normal anterior nasal opening would be rapidly repaid and the tension equilibrated. Not so in cases of long-continued mouth-breathing where atrophy and collapse of the nasal valve has set in. The portion of air abstracted is in this case not adequately repaid; it is either too long in arriving or too little in amount, and the tension is not equilibrated, so that flushing of the whole mucous lining takes place from unsupported intra-vascular pressure. A Seigle's aspirator, as

used for the ear, will afford you an excellent example and proof of this. Having properly fixed the instrument into the ear, on compressing the ball even the thick non-vascular lining membrane of the auditory canal is seen to grow pale. On allowing the ball to expand the whole lining membrane becomes a bright red. The same thing occurs in the nose where the lining membrane is highly vascular and the vessels are thin-walled and the cellular tissue is lax and abundant. The abstraction of the smallest quantity of air from the nasal chambers and post-nasal space by the stream of air on its way to the lungs *viâ* the mouth, if not instantly compensated by a corresponding inflow from the outside air *viâ* the anterior nares, will cause a lessening of the tension of the air in the nose and accessory cavities. This lessened tension will be responded to by the lining membrane of the nose and accessory cavities as a general redness or flushing of the parts, and this will occur, of course, in direct proportion to the degree of rarefaction. This I hold to be a physical fact and upon the recognition of this fundamental physical fact rests the whole science and treatment of affections of the throat, ear, nose, and accessory cavities.

I have taken a condition of things that does not exist in nature—namely, mouth-breathing with a perfectly healthy and physiologically adequate external nose and nasal chambers—and I have shown that even in this impossible and theoretical condition of things, with an unobstructed and healthy nasal tract, the effect and tendency of mouth-breathing is to induce not only anterior nasal obstruction by collapse of the nose valve, but general lessened capacity or obstruction from swelling and engorgement of the spongy and mucous lining of the nose and accessory cavities. I have described to you the collapsed, atrophied, pointed, and pinched nose of the mouth-breather. One other physical alteration is often apparent. The mouth-breather, in order to keep open the oral slit, partly raises the upper lip and in doing so uses a muscle (the levator labii superioris alæque nasi), and so involuntarily and unconsciously raises and arches the lower border of the wings of the nose. This disfigurement is very apparent in some cases of nasal obstruction and can be altered and done away with by curing the nasal obstruction and using the nose and not the mouth as the respiratory inlet. The peculiar arrangement and formation of the external nose has never been sufficiently recognised nor has the fact of its being a valve regulated and presided over by several distinct and more or less powerful muscles been taken into consideration in the diagnosis and treatment of disease of the nasal chambers. If you go to the Zoological Gardens and watch the seals and sea-horses swimming you will observe that before diving these animals completely close the nasal opening by the sphincters of the nose and widely open it by the dilators when arriving at the surface. These same muscles are present in the human nose and are none the less important in regulating the capacity of the portals of the respiratory tract. One may frequently observe in cases of hemiplegia that on the hemiplegic side of the face the wing of the nose is collapsed, and consequently that that side of the nose is obstructed and lost to the respiratory function. In deep chloroform narcosis and some head injuries nasal respiration is usually in abeyance from loss of power in the dilators of the nose.

Now to make matters clear we will sum up my contentions so far: (1) that mouth-breathing, if persisted in even in the hypothetical condition of a healthy and patent nose, would ultimately induce anterior nasal obstruction from atrophy following disuse of the nose valve; (2) that this would be followed by swelling of the lining membrane of the nose and accessory cavities from vascular dilatation; and (3) that this again would lessen the capacity of the nasal respiratory tract and tend to set up nasal obstruction. A vicious cycle is set up. Mouth-breathing tends to obstruct the nose and this very obstruction maintains and continues the mouth-breathing.

Beyond the fact that the external nose itself is liable under certain conditions to be a source of obstruction to nasal respiration, does the normal condition or arrangement of the clothing or lining of the rigid walls of the nasal chambers account for the ease with which the nasal cavities may become obstructed and the nasal respiratory function lessened or placed in abeyance? Although the framework of the nasal chambers is of bone and is admirably fitted to maintain the cavity and capacity of these chambers the necessity of placing within them an organ capable of performing the various physiological functions of the nose discounts the nose to some extent as the main respiratory inlet. We have lining these cavities and their various ledges and recesses a mucous membrane at once remarkable for its histological characters and physiological functions, and varying according to the part of the nasal chamber it may happen to line. In the vestibule the lining membrane is in a transition state between skin and mucous membrane; it secretes mucus, but still retains the hairs and the sebaceous glands proper to the skin. It is firm and closely adherent to the inlet of the nasal chambers and not liable to any appreciable swelling or turgescence. On entering the nasal cavity we find the mucous lining practically divided into two areas, the respiratory and olfactory. All that portion in a horizontal line above the lower border of the middle turbinal body is the olfactory area and the broader and more extensive surface below this line the respiratory area. Now, it is the respiratory area that we are more particularly interested in, and at the onset I would say that if it were not for presence in this area of the lower turbinal body we should hear little of nasal obstruction, and the occupation of the otologist, rhinologist, and laryngologist would be extremely limited. The lower turbinal bone extends from before backwards right in the path of the inspiratory stream and encroaches on the posterior and anterior nasal openings. It is covered with a membrane of peculiar constitution in so far as it is extremely thick, measuring at times from one-eighth to one-half of an inch. It has many vascular cavernous spaces in it resembling erectile tissues and is capable of sudden contraction and dilatation resembling true erectile organs. It so happens that this erectile tissue is more pronounced opposite the anterior and posterior openings of the nose and when distended it is capable of occluding both anterior and posterior openings completely and so capable of stopping nasal inspiration on one or both sides. A close study of the behaviour of this tissue in its various physiological and pathological conditions is a key to the understanding of the various phases of nasal obstruction and the many consequences arising therefrom. A perfectly healthy individual with a normally constituted nasal organ and placed always under normal circumstances would no doubt theoretically pass through the whole span of his existence without even a temporary obstruction to his nasal respiration such as is experienced in a common cold. When, however, one considers that such a condition of things does not and cannot exist—that the child in many cases is born with an affection of the mucous lining inherited from his parents, that his membrane may be affected by the various constitution and local complaints of its owner, that errors of diet, errors in environment, and errors in the constant variations and purity of the inhaled air all may have a disturbing influence on the proper physiological function of the turbinal body,—can we be surprised that the normal physiological working of this organ is frequently upset and ends in dilatation and obstruction? The air enters the nasal chambers some 20,000 times a day and should continue to do so without intermission during the whole life of the individual. The functional activy of the turbinal body is ceaseless and for its size exceeds the functional activity of any other organ of the body. It is calculated that two quarts of water a day are given up to the inspired air by this body and the lining of the nasal respiratory tract, and that all the air that enters the larynx, no matter what the outside temperature may be, is warmed to near the temperature of the body. This is no light duty. The pathological tendency of any organ is in direct proportion to its functional activity. Therefore, the pathological tendency to temporary and permanent dilatation or to engorgement from relaxation of vaso-motor tone and consequent hypertrophy is apparent. 99 cases out of every 100 of obstruction to the nose are due to this cause. The dilatation may be temporary, intermittent, or permanent, but still the tendency is there, the tone is lost, and nasal obstruction is the result.

Nothing is more common than for a patient to tell one that he is all right during the day when he is up and about, that he can breathe through the nose with ease and comfort, and can go upstairs or even take active exercise with the mouth shut. But directly he places his head on the pillow a very short time elapses before the nose is completely blocked. The explanation is simple. The tone of the tissue is so lax that the extra-venous pressure caused by the horizontal position is sufficient to dilate his turbinal bodies and stop his nasal respiration. Many a time have I been told by a patient that, when in bed even, the side of the nose which is lowest is the obstructed one and that on turning over the clear side

becomes obstructed and the obstructed side clear. The effect of gravity through a range of four or five inches is sufficient to fill one side and free the other. Loss of tone of the turbinal bodies with or without hyperplasia is the commonest cause of nasal obstruction and this, like atrophy, may be strictly limited to one side, but in the great majority of cases both sides are affected and if one side be affected first the other side follows sooner or later. The recognition of the various degrees of these conditions is difficult, but still with a knowledge of what to look for and a proper subjective examination of the patient a correct diagnosis can be made.

To exemplify the points of the diagnosis I will give you an illustration of a case of atonic turbinal body which set up chronic posterior arytenoiditis, general pharyngitis, with granulations on the pharynx, indigestion, and general deterioration of health. Quite lately, at the instigation of Dr. G. Herschell, a gentleman living in France and who is a medical man brought his daughter to me for my opinion. The patient was about 18 years of age; she was of a sallow, muddy complexion and was spotted about the nose, chin, and mouth with acne indurata and acne rosacea. Her chief complaint was discomfort in the throat with cough continuing more or less all the time. Her father had consulted several specialists in Paris, Nice, and London, with the result that most of them differed except on one point—and that one point was that the nose was perfectly healthy and unobstructed. They were all agreed so far; but they could not account for the constant "hemming" cough, just as if it were to clear some little thing away, the general over-moisture and vascularity of the throat, the tendency to sore-throat and to catch cold, and the indigestion and general want of tone. Whatever they did or said they did not cure the patient's trouble or her father would not have brought her to me. I have stated that there was posterior arytenoiditis, general over-vascularity with increased moisture in the pharynx, and some post-nasal catarrh. If the nose was healthy and quite patent and its physiological functions properly performed, what was the cause of the condition of the pharynx and larynx? Every effect has a cause—a patient does not get into this condition without good reason. It was not from syphilis, or tubercle, or gout, or alcohol, or smoking, or anything direct that one could make out. Moreover, it baffled all attempts at treatment by these various specialists; it continued; it was not cured, and why? It was a case of nasal obstruction, more especially at night. True, during the day, when up and about, the nose was clear, and when I examined it there was ample room for nasal respiration, but on cross-examination the patient admitted that her mouth and tongue were dry in the morning, that the discomfort of the cough was worse till she had taken food, and when I mentioned it she said that she had noticed that the nose was not clear at night. I did not rely upon the patient's statement entirely nor did I arrive at my diagnosis by the process of exclusion. I examined the nose; and what did I find? Well, in the first place, there was then ample room for nasal respiration. In no sense could one say that the nose was obstructed. The mucous lining of the nose was of a liver-red colour, with inspissated mucus in patches at various points indicating general congestion of the interior. On the septum opposite to each lower turbinal body was a deep groove or sulcus running from before backwards, its concavity corresponding accurately with the convexity of the turbinal body. There could be no doubt that the turbinal body had formed that groove and when distended it rested and accurately filled that groove. No further evidence was required. I ordered a mild alkaline antiseptic wash for a week. I then with the galvano-cautery pinned down the most prominent parts of the turbinal body to prevent it swelling much, in the way that a button is put on the seat of a chair, and with the help of a little chloride of zinc spray to the larynx sent this patient back to France practically cured in less than one month from the commencement of treatment. This was, then, undoubtedly a case of nocturnal nasal obstruction. The congestion of the nose, the post-nasal space, and the pharynx was started and maintained by the laboured inspiration necessary in these cases. Laboured inspiration means delay in compensating the tension of the air in the respiratory tract and this means vascular dilatation from insupported intra-vascular pressure. I let in the air with the galvano-cautery, the tension was rapidly equilibrated and the vascular turgescence quickly subsided, the consequent over-secretion disappeared, and the arytenoid cartilages were no longer irritated by the constant dribbling of mucus over their surface into the laryngeal box. The hemming cough was no longer requisite to drive the secretion out again. Mucus in large quantities no longer passed into the stomach to impede digestion and the tone and general condition of the patient improved. This is the history of 99 out of every 100 cases of laryngeal catarrhs, huskiness and morning cough, sore and uncomfortable throat, the tendency to catch cold, and the general catarrhal condition of the upper respiratory tract. It all means mouth-breathing from nasal obstruction.

Unfortunately, the effects of atony and dilatation of the turbinal body such as I have endeavoured to place before you are not limited to the respiratory tract proper. We have passing out from the walls of the nose and naso-pharynx certain passages or openings communicating with cavities and chambers of considerable importance. These chambers or cavities are one and all culs-de-sac and communicate only with the nose or naso-pharynx, and that by in most cases extremely small openings. Each cavity is lined by mucous membrane continuous with that of the nose and is liable to be affected by the same pathological and physical conditions as the nose. Affections of the frontal, ethmoidal, sphenoidal, and maxillary sinuses may be originated or kept up by obstructive conditions of the nose. Catarrh may spread into one or any of these cavities. The opening into the cavity becomes obstructed and the products of catarrh accumulate and may form an abscess. Take the tympanic cavity as the best and commonest instance of this state of things. Nasal obstruction in these cases is fatal to a speedy restoration and cure. The very physical condition of nasal obstruction enhances and keeps up the occlusion of the only outlet to the discharges. In the case of the tympanic cavity it empties itself, as a rule, by perforating the tympanic membrane. But in the case of the frontal and maxillary sinuses the walls are bony and greater difficulty is experienced in getting rid of the contents. Whatever surgical procedure you adopt to empty the contents your first object should be to restore the patency of the natural outlet into the nose and see that outlet is maintained by freely ventilating the nose. A case of ear discharge will not get well unless you restore the natural patency of the Eustachian tube.

I will go one step further. I maintain that obstruction to nasal respiration may set up a rarefaction of the air contained in each of these cavities and cause congestion of the lining membrane and a possible outpour of fluid and blockage of the natural vent, although there be no previous disease or catarrh present. Take the tympanic cavity, where we can see the process developing. Blockage of the opening of the Eustachian tubes leads to deafness, which means that the air is absorbed by the lining of the closed cavity and the drumhead is driven in by the unsupported atmospheric pressure. An examination of the drumhead will now show no fluid present, but in 24 hours or 48 hours if the obstruction be maintained and air be not supplied to the tympanic cavity and the intra-vascular pressure is not equilibrated, fluid is poured out and marked vascularity is apparent down the handle of the malleus and in the neighbourhood of the short process. Occlusion of the frontal and antral openings is followed by the same result. As long as the nose continues to be blocked the deafness will remain. Treatment directed to restore the patency of the nose will restore the patency of the Eustachian tube and the hearing will suddenly return. The difficulty of treating an acute rhinitis is that the occlusion set up by the congestion is the prime factor in maintaining the congestion from the necessity of carrying on respiration by the supplemental respiratory opening the mouth. If you can only let air into the nose by any artificial means you will cure the rhinitis in half the time. I maintain, then, that the key to the prevention and treatment of all diseases of the accessory cavities of the nose, including the tympanic cavity, is to maintain the natural physiological condition of the nose and see that its respiratory capacity is sufficient to rapidly equilibrate the air in the respiratory tract during inspiration. I cannot consume your time by giving you illustrations, but you must believe me when I say that my note-books are teeming with cases that support my contentions to the letter.

In chronic deafness with discharges and tinnitus it is just as important to see that there is a free inlet of air to the respiratory passages as in the acute cases. Chronic deafness, or what is known as "dry catarrh" (a more ludicrous term could not well be invented), is nothing more or less than chronic Eustachian obstruction due in the great majority of

cases to chronic nasal obstruction from turbinal atony or hypertrophy. To keep on daily Politzerising is like attempting to fill a sieve with water. The daily supply of air is rapidly absorbed and the patient is left *in statu quo antea*. A certain amount of thickening of the lining of the tympanic cavity is common from the over-vascularity attendant on the diminished air contents, and in not a few cases where the catarrhal process has in addition invaded the tympanic cavity adhesions have taken place between the tympanic membrane and promontory and between the articulations of the ossicles. This is all the more reason for restoring the patency of the Eustachian tube to insure a constant and free supply of air to the diminished tympanic cavity, and by this to supply a medium for the conduction of sound waves from the active remnant of the drumhead to the foramen rotunda or stapes. Whilst any portion of the drumhead remains capable of vibrating, that portion, provided air be present in the tympanic cavity, is capable of conducting aerial vibrations to the internal ear. No conduction of aerial vibration *in vacuo* is possible and any rarefaction of the air in the tympanic cavity renders the conduction of impressions from the outside world all the more difficult.

I have acted on these principles now for many years. I have been agreeably rewarded by finding that very few cases present themselves that do not mend and quite a number of cases of long-standing deafness are considerably and permanently improved. In the same way in the last few years I have had the handling of quite a number of cases of chronic antral disease which had already been operated on and were wearing drains in the site of one or other tooth. The daily washing of the cavity had to be continued, much to the annoyance of the patient. The wash in most cases could be forced into the nose and in some cases passed quite easily. It was quite a common experience in the old days, before the proper method of treating the frontal sinus was known, for a discharge to continue from this cavity for one, two, or more years without diminishing. As soon as the practice was established of opening the frontal sinus from the front and freely restoring its natural communication with the nose the convalescence was measured by days and not by years. In the maxillary sinus a free opening of that side of the nose associated with an enlargement of the ostium maxillare will go a long way in assisting you to cure the disease and to render recurrence impossible. In the case of the daughter of an English medical man who was brought to me with a large abscess of the antrum bulging into the nose a considerable opening into the antrum and in the neighbourhood of the ostium maxillare was sufficient to cure the disease without a counter opening in the region of the teeth. The nose is the natural and proper outlet for all these discharges and the warm, moistened, and filtered air as supplied by the nose is their natural and proper contents.

And now I come to a subject the importance of which cannot be over-rated. It is the association of chronic turbinal distension and hypertrophy with, in many cases, a state of things as exemplified by these casts. The association of mouth-breathing with high palate, unsymmetrical upper jaw, prominent nose, open mouth, and thin, flattened face is a constant one. On attempting to reason this subject out at a meeting of the Odontological Society I was met by a perfect hurricane of adverse criticism. I was told that all these cases were hereditary and there was nothing more to be said on the subject. It reminded me very much of the reception a dog gets in the streets of Constantinople if he happens to leave his own street and wander to another. Whatever meaning the members of the society attached to the term "heredity" they are welcome to, but it at all events does not mean that any given person with a facies such as I have indicated must of necessity be born with the same. I am old enough now to have seen many instances of children with beautifully formed faces, symmetrical dental arches, and perfect nasal respiration, become in after life quite altered. The upper arch has become so distorted that the molar teeth on each side are approximated so that the teeth of the upper jaw rest only by their edges on the teeth of the lower jaw, whereas the incisor teeth of the upper jaw protrude forwards and hang in front of the incisor teeth of the lower jaw. The whole of the upper jaw may become atrophied, the nasal respiration almost entirely suspended, and the palate highly arched and V-shaped, and the mouth constantly open. Why this change? Was it the evolution of the hereditary tendency which in these cases did not exist, the parents in all these instances having remarkably well-formed upper jaws and being particularly good-looking? I can produce the same effect on any young animal chosen indiscriminately by blocking its nose for a long time with cotton-wool. Is it unreasonable to suggest that turbinal atony and hypertrophy in the young and growing subject will act as the piece of wool in the nose of the young animal.

From what I have said as to the alteration in the air pressure inside the nose consequent on anterior occlusion you will gather that a small increase of pressure from without constantly applied on the walls of the nasal box is capable of pushing up the palate, disarranging the upper mandibular arch, and causing general atrophy and an undeveloped condition of the whole upper jaw. Moreover, if these cases are taken in an early stage and the nasal respiration is restored the constant stream of air passing through the nose moulds and expands the upper maxilla and in time the greater part of the deformity will disappear.

One point more. It is a matter of common knowledge that children affected with post-nasal growths or enlarged tonsils or both often become pale, thin, anæmic, listless, and generally out of sorts. I myself have never heard a satisfactory explanation offered for this associated condition. I say "associated," for the association is fairly constant. In grown-up persons who suffer from post-nasal catarrh and pharyngitis and chronic laryngeal catarrh I have noticed two very prominent symptoms—chronic flatulent dyspepsia and a suffused and at the same time leaden appearance of the complexion. The skin of the face becomes thick, heavy, and patchy and often the vessels of the conjunctiva are permanently dilated. I take it that in both cases a large quantity of unhealthy mucus finds its way into the stomach. This in the child probably interferes with nutrition and in the grown-up person is the cause of the dyspepsia. The want of proper oxidation at night is the probable cause of the altered and damaged complexion. Whatever be the explanation it is our common experience that if the nasal respiration be restored and the nose and throat trouble cured, in both cases nutrition improves and the patient is speedily restored to health.

ON DIPHTHERITIC PARALYSIS.[1]

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SOME few months ago I happened to see within a short period of time some half-a-dozen interesting cases of diphtheritic paralysis, and this paper is the outcome of a search into the literature of the subject, with the object of elucidating certain points presented by these cases. I propose in the first instance to give short details of six cases, adding a few words of comment upon their more unusual features. Some remarks will then be made upon albuminuria and ataxia in diphtheritic paralysis and also upon the prognosis and treatment of this complication of diphtheria. The rare hemiplegic form of diphtheritic paralysis will not be included here, for it is very seldom, if ever, a direct effect of the diphtheritic poison, but is mostly due to embolism or some analogous process. In the case which I recorded in the *Medical Chronicle*, 1892, an embolus was found at the bifurcation of the middle cerebral artery. I have to thank Mr. J. H. Woods, Mr. H. de C. Woodcock, and Mr. E. A. Rock for the additional notes upon their cases which they have kindly placed at my disposal.

CASE 1.—A girl, aged 10 years, a patient under the care of Mr. Woods of Batley, had a slight sore-throat about March 28th, 1900, the nature of which was somewhat doubtful. The throat quickly recovered, but albumin was found in the urine on March 31st. About three weeks later the paralytic symptoms appeared, but there was no regurgitation of fluids into the nose. I saw the child at Mr. Woods's request on May 5th, when there was marked unsteadiness in walking, the feet being kept wide apart. There was no paralysis of the palate. The pupils reacted to light and accommodation. No knee-jerks could be obtained. The muscles of the legs were flabby. The urine contained albumin, two parts per 1000. Mr. Woods told me subsequently that the child

[1] A paper read before the Leeds and West Riding Medico-Chirurgical Society on Nov. 2nd, 1900.

became listless and the albumin rose to seven parts per 1000. Death occurred on May 12th owing to respiratory paralysis with increasing accumulation of secretion in the bronchial tubes.

One of the most striking features of this case was the slightness of the attack of diphtheria which was followed by fatal respiratory paralysis. It is curious to note how opinions differ upon the frequency of paralysis after mild and severe diphtheria. Some, like Jacobi[2] and Henoch,[3] seem to think it more common after mild diphtheria. Henoch, however, adds that in severe cases death may occur before the paralysis can supervene. Others say that severe cases are more often followed by paralysis (Trousseau,[4] Bowman,[5] Cadet de Gassicourt,[6] Goodall,[7] and Foord Caiger[8]), whereas others state that it may occur equally well after mild or severe diphtheria. Some content themselves by saying that a benign attack may be followed by severe paralysis. We cannot go far wrong in believing with Gee[9] and Lloyd[10] that there is no relation between the severity of the primitive attack of diphtheria and the paralysis—at least, no constant relation. The absence of paralysis of the palate is also noteworthy. In 102 of Goodall's 125 cases[11] there was paralysis of the palate, and in 83 it was the first part affected. The prognosis appeared favourable when I saw the child a week before her death, notwithstanding the albuminuria present. The case illustrates the risk of the supervention of fatal cardio-pulmonary symptoms even in cases of paralysis of only moderate severity.

CASE 2.—A boy, aged eight years, under the care of Mr. Woodcock, had a severe attack of diphtheria with much membrane. He was injected with serum on two occasions. Paralysis of the palate appeared early as soon as the acute symptoms passed away. There was vomiting in the third week and the pulse was infrequent—about 60 per minute. There was a squint in the right eye. The child complained of pains in the legs. The urine contained much albumin. Mr. Woodcock asked me to see the boy on June 6th, 1900. He lay listlessly in bed and passed urine and fæces under him. There was much wasting. He hardly moved at all, his legs remaining wherever they were placed. He did not appear to notice the prick of a pin. There were no knee-jerks. There was a toneless and absolutely ineffective cough. The respiratory movements were very feeble. There were numerous bronchitic sounds in the chest. I saw this boy again some weeks later. He was then much improved. He was still unable to stand or walk and there was considerable wasting. He swallowed almost perfectly, fluids only occasionally regurgitating. The knee-jerks were still absent. He had control over his bladder and rectum. The patient subsequently recovered completely.

This was undoubtedly a most severe case. When I saw the child I thought that death must occur in a few hours. There was considerable respiratory paralysis and the bronchial secretion was accumulating. I thought that the diaphragm was at least partially involved. Respiratory paralysis is undoubtedly very fatal, yet even very severe cases have been known to recover. I took it that the toneless cough was evidence of paralysis of the adductors of the larynx. The same symptom was noted in Case 3 in the relapse. The vomiting was another noteworthy feature in the case. Hector Mackenzie[12] says that it occurred in 72 of his cases. It was unassociated in the above case with any marked symptom of cardiac failure. It is supposed to be due to implication of the vagus nerve. Mackenzie points out that its early occurrence in a case should be a cause for alarm. Paralysis of the sphincters is rare in diphtheritic paralysis, so that some authors almost deny its existence. I attributed it in this case rather to the listlessness of the patient than to actual paralysis. Maingault[13] appears to look upon it as not very uncommon. In 20 of Mackenzie's cases there was transitory incontinence of urine. The value of the case more recently reported by Englisch[14] is somewhat impaired by an interval of 15 years between the diphtheria and the time when he was seen by Englisch.

CASE 3.—A boy, aged three years and nine months, was sent to me on July 4th by Mr. Woods of Batley with diphtheritic paralysis. He had severe diphtheria early in June, 1900, and was injected with serum on four occasions. Difficulty in walking was noticed as soon as he got out of bed. There had been a little improvement in walking recently. The boy looked pale. Fluids regurgitated and the voice was very nasal in character. The pupils reacted to light and accommodation. The gait was more paretic than ataxic. The knee-jerks were absent. There was still a cloud of albumin present in the urine. I was asked to see the boy again on July 16th owing to a relapse. He had been taken away into the country as recommended and he was doing well until July 8th. He was then taken out in a perambulator on a hot day and he had been worse ever since. The child lay restlessly in bed. He appeared to be unable to move the eyeballs. There was a toneless cough. The breathing occasionally became infrequent. There was no obvious paralysis of the intercostal muscles or diaphragm and there was no evidence of bronchitis. The knee-jerks were absent. There was no difficulty in feeding the child although there was still extensive paralysis of the palate. The head tended to drop forward. There was still a cloud of albumin present. Mr. Woods told me on August 15th that the child was steadily improving. He had lost his nasal voice. The legs were still weak, but he had succeeded in walking across the room. He subsequently recovered completely.

The most noteworthy feature of this case was the relapse. In the first attack the paralysis was mild, but in the relapse the child's condition appeared to be serious chiefly owing to the irregular breathing. Goodall[15] noted irregular breathing in four cases, of which two proved fatal. Relapse is difficult to explain in diphtheritic paralysis. It might be due to the liberation of the poison stored up in some place in the body, such as the spleen (Martin, quoted by Lloyd[16]), or to a new supply of the poison, as might occur in a relapse of the diphtheria itself, but there was no such relapse in this case. The cough here, as well as in Case 2, was toneless. Goodall[17] noted aphonia and ineffectual cough in 11 cases and five were fatal. Several other authors mention this toneless cough and aphonia (Gee,[18] Henoch,[19] Baginsky,[20] and H. Mackenzie[21]).

CASE 4.—A boy, aged five years, a patient under the care of Mr. Rock, had severe diphtheria early in June, 1900, with much membrane on the tonsils and uvula. He had never picked up in spite of all efforts to feed him up. He had not walked since then and he remained in a listless state. On July 14th fluids began to regurgitate. Mr. Rock asked me to see the boy on July 16th. He then had a nasal voice and fluids regurgitated. He coughed and choked when swallowing fluids. The palate was quite motionless. The eye muscles were normal. He could not stand or walk. The muscles were flabby and the knee-jerks were absent. There was weakness of the muscles of the neck so that the head would fall forward. The bladder functions were normal. There were slight signs of bronchitis. Mr. Rock informed me that an internal squint appeared a few days later and the right pupil became much dilated. On August 7th the pupils were again normal in size. The squint had greatly improved, but the boy could not walk yet. The knee-jerk was absent on the right side but could just be obtained on the left. Subsequently the boy recovered completely.

The debility persisting after the attack was one of the most marked features of this case. This debility without very definite paralysis is mentioned by several observers, including Trousseau[22] and Huber.[23] It has been known to prove fatal. Thus Jenner[24] tells of a case in which death was due to progressive debility. The late onset of definite paralysis at least a month after the acute attack was also peculiar, but such paralysis has been known to occur as late as the ninth or tenth week (H. Mackenzie[25] and Woodhead[26]). The weakness of the neck muscles leading to head drop is not very uncommon and most writers, including the earlier ones,

[2] Twentieth Century Practice, vol. xvii., 1899.
[3] Vorlesungen über Kinderkrankheiten, 1899.
[4] Clinique Médicale, tome i., 1861.
[5] Quoted by Ross and Bury, Peripheral Neuritis, 1893.
[6] Traité de Clinique des Maladies de l'Enfance, 1887.
[7] Brain, 1895.
[8] Allchin's Manual of Medicine, vol. i., 1900.
[9] Allbutt's System of Medicine, vol. i., 1896.
[10] Twentieth Century Practice, vol. xi., 1897.
[11] Loc. cit.
[12] St. Thomas's Hospital Reports, vol. xxi., 1891.
[13] Archives Générales de Médecine, 1859.
[14] Wiener Medicinische Presse, 1898.
[15] Loc. cit. [16] Loc. cit. [17] Loc. cit.
[18] Loc. cit. [19] Loc. cit. [20] Kinderkrankheiten, 1899.
[21] Loc. cit.
[22] Loc. cit.
[23] Pediatrics, vol. vii., 1889.
[24] Diphtheria and its Treatment, 1861.
[25] Loc. cit.
[26] Brit. Med. Jour., vol. ii., 1898.

mention it. The choking and coughing on taking fluids, along with the presence of some bronchitis, made me think that the child ought to be fed through a tube, but this did not prove to be necessary. It is well, according to Collins,[27] to delay using the tube as long as it is safe to do so. The danger of food passing into the air passages is, however, a real one. Stress is laid upon it by several writers, including Mackenzie,[28] Gee,[29] Oppenheim,[30] and Maingault.[31] Mr. Rock has recently given me notes of a case in which death resulted in two days' time from the entrance of food into the larynx in a case of diphtheritic palsy. There was present a large amount of membrane in this case. It was stated by Bowman[32] that cases in which there was dense and widely distributed membrane were most surely followed by paralysis. In 53 out of Goodall's [33] 125 cases much exudation was present. If a severe local lesion such as would lead to a large amount of exudation is likely to be followed by a correspondingly severe intoxication, then the frequent association of much exudation and paralysis is readily understood.

CASE 5.—A man, aged 34 years, came to the out-patient department of the Leeds Infirmary in October, 1899, and gave the following history. He had severe diphtheria in June, 1899. He was away from work for seven weeks. He then worked for four weeks when he was again obliged to give it up. Fluids regurgitated through the nose after the attack. When he went away after the illness he was a little weak in the legs, but there was no unsteadiness until after he resumed his work. It was this unsteadiness which compelled him to give up his work on the second occasion. The patient was undoubtedly unsteady in walking. Romberg's symptom was distinctly present. The knee heel symptom could also be obtained. There was not the least doubt about the presence of ataxia in the legs. The pupils reacted to light and accommodation. The knee-jerks were absent. There were no bladder symptoms and no pains. Unfortunately, no note was made about sensation, but I believe that it was found unaffected. The patient was improving. He was at his worst in September. He continued further to improve and was eventually lost sight of.

The course of the disease in this case was peculiar as there was a considerable interval between the first paralytic symptoms and the ataxia. The patient was quite clear about his history. He had to relinquish his work on the second occasion on account of the incoördination which was a new symptom to him. There is the same difficulty in understanding how such new symptoms as the above should appear at some interval after the onset of the attack as there is in understanding how relapses as in Case 3 occur, or how a considerable time may elapse between the primary attack and the onset of the paralysis. There was no risk of mistaking this case for one of early tabes dorsalis. It is strange that a difference of opinion should exist as to the frequency with which paralysis follows diphtheria in the adult. Osler[34] and Landouzy, quoted by Goodall,[35] maintain that paralysis follows relatively more often upon the diphtheria of the adult than that of the child. Bowman,[36] quoted by Ross and Bury, has only met with rare instances in the adult which have not been followed by paralysis. Foord Caiger,[37] however, says that young children are more frequently affected than older ones.

CASE 6.—A boy, aged seven years, was brought to the out-patient room of the Leeds Infirmary in October, 1899. He had diphtheria six weeks previously. Fluids regurgitated shortly after the attack. He had not been injected. There was unsteadiness in gait. The child walked with his legs wide apart. He swayed when the eyes were closed and the feet were placed together. No knee-jerks could be obtained. The boy steadily improved so that when seen in the following April the incoördination had entirely disappeared and fluids did not regurgitate. I saw him a few weeks ago and he was quite well. His knee-jerks had returned.

This was a case in which ataxia was the most prominent feature.

Albuminuria and diphtheritic paralysis.—Albuminuria was present in Cases 1, 2, and 3. Unfortunately, the urine was not examined in Cases 4, 5, and 6. The considerable frequency of albuminuria in diphtheria is universally admitted. It is usually estimated as present in from one-half to two-thirds of the cases. The proportion is larger in fatal than in non-fatal cases. Thus H. Mackenzie [38] put it down as occurring in 76 per cent. of the former and in 49 per cent. of the latter. It is also more frequent in the paralytic than non-paralytic cases. Thus in Goodall's cases [39] it was noted in 88 per cent. of the former and only in 30 per cent. of the latter. Of course, it is possible, as Mackenzie remarks, that cases of diphtheria with albuminuria are likely to be kept more carefully under observation than other cases, but this will not account for the considerable discrepancy between the figures. An increase in the albuminuria has even been noticed at the time of the onset of the paralysis, as in Trousseau's well-known case.[40] The significance of albuminuria in diphtheria is important in considering its relation if any to the paralysis. It is very generally looked upon as an expression of the intensity of the intoxication, as Goodall,[41] Tirard,[42] Mackenzie,[43] and others mention. If the paralysis is a toxic symptom then, other things being equal, it would be expected to occur more frequently in cases where the intensity of the intoxication is greatest, that is, in cases in which albuminuria is also most likely to be present. Even if albuminuria is an indication of the severity of the intoxication it does not of course follow that it is an exact measure of the degree of intoxication. It is not, therefore, necessary to hold that the larger the amount of albumin present the more likely is the patient to develop paralysis. Thus Bowman [44] states that there is no real relation between the amount of albumin and the occurrence of paralysis. In Goodall's cases the amount of albumin present was very variable both in different cases and in the same case at different times. Yet Goodall [45] thinks that the more persistent the albuminuria and the greater the quantity, the more severe the case and the more likely are paralysis and cardiac irregularity to follow. The question has been discussed as to whether the paralytic symptoms are not really a manifestation of uræmia. Trousseau [46] long ago pointed out that the nervous accidents in diphtheria do not resemble the symptoms of uræmia and that they may occur in cases in which there is no albumin present. Maingault,[47] in his excellent description of diphtheritic paralysis, says that there is no relation of cause and effect between diphtheritic albuminuria and the paralytic accidents. Cadet de Gassicourt [48] also agrees in this statement. It certainly occurred to me when I heard of the death of Case 1 as to whether the child might not have died from uræmia, but neither Mr. Woods nor I thought that it was so. Of the vomiting occasionally seen in diphtheritic paralysis and present in Case 2 Mackenzie [49] says there are two reasons against its being the result of uræmia—viz., (1) it occurs, though rarely, where the urine is free from albumin; and (2) it is associated with other symptoms of cardiac failure. Gee,[50] however, says that vomiting is in most cases associated with an affection of the kidney. The urine is albuminous and scanty and even entirely suppressed. The patient, however, retains consciousness and convulsions rarely precede death. B. E. Myers [51] further states that the general nervous symptoms are convulsions, drowsiness, delirium rarely and restlessness frequently. We may apparently conclude that diphtheritic albuminuria has no other relation to diphtheritic paralysis than that both complications are more prone to occur where the diphtheritic intoxication is most intense. The question is not considered here as to whether kidneys damaged by a toxic nephritis are not more likely to lead to the retention within the body of the paralysis-producing poisons than would happen with healthy kidneys.

Ataxia in diphtheritic paralysis.—Ataxia was present in Cases 1, 5, and 6. It is now very generally recognised that diphtheritic paralysis is due to an affection of the peripheral nerves, although slight lesions have been occasionally found in the spinal cord. Quite recently Playfair and Rainy [52] have published a case with slight lesions in the spinal motor-cells and none in the nerves, and Rainy [53] has induced changes in the motor-cells by the injection of diphtheria

[27] Treatment of Nervous Disease, 1900.
[28] Loc. cit. [29] Loc. cit.
[30] Lehrbuch der Nervenkrankheiten, 1894.
[31] Loc. cit. [32] Loc. cit.
[33] Loc. cit.
[34] Text-book of Medicine, 1898. [35] Loc. cit.
[36] Loc. cit. [37] Loc. cit.
[38] St. Thomas's Hospital Reports, vol. xx., 1890.
[39] Loc. cit. [40] Loc. cit.
[41] Loc. cit.
[42] Albuminuria and Bright's disease, 1899
[43] Loc. cit. [44] Loc. cit.
[45] Encyclop. Med. Diphtheria, vol. i., 1900.
[46] Loc. cit. [47] Loc. cit. [48] Loc. cit.
[49] Loc. cit. [50] Loc. cit.
[51] THE LANCET, Sept. 22nd, 1900, p. 869.
[52] Edinburgh Hospital Reports, vol. vi., 1900.
[53] Journal of Pathology, July, 1900.

toxin into rabbits. Since Déjerine's classical paper[54] on pseudo-tabes the possible occurrence of ataxia in diseases of the peripheral nerves has been everywhere admitted. Long before any exact knowledge was obtained in regard to the pathology of diphtheritic paralysis a certain clumsiness in movement and an uncertain gait were noted by early writers on this subject. Trousseau was one of the first to call attention to it. In 1877 Rumpf[55] recorded a case from Erb's clinic in which the ataxia was very pronounced and he refers to similar cases recorded by Grainger Stewart[56] and Foot.[57] The ataxia is nearly always combined with more or less paresis. Some authors, such as Baginsky,[58] Rumpf,[59] and G. Stewart,[60] state that the ataxia appears first and then later the weakness. Of course, the weakness would tend to mask the ataxia. It is quite true that it is very unusual to find in diphtheritic paralysis the degree of disorderly movements with the flinging, stamping gait so commonly seen in tabes, but this is no reason why slighter degrees of incoördination should not be admitted. Babinski,[61] in his excellent article on neuritis, thinks that the term "ataxia" has been used too loosely in connexion with peripheral neuritis. He argues that mere weakness of certain groups of muscles—such, for instance, as the muscles of the back of the thigh in addition to the extensors of the foot—might give rise to a gait that had many resemblances to the true tabetic gait. He refers to the fewness of cases of multiple neuritis with the true tabetic gait which have been recorded and thinks that in a case reported by Jaccoud there must have been spinal cord lesions as well. This, however, would not invalidate the contention that typical ataxia may occur in diphtheritic paralysis. The ataxia may be very widespread, as in the case very carefully noted and recorded by Buzzard, in which the clumsiness of movement even extended to the lips. In some cases the ataxia has been of a reeling character, so that there was danger of mistaking it for cerebellar ataxia (Ashby and Wright[62] and Mackenzie[63]). Here probably the ataxia had extended to the trunk muscles.

Ataxia is supposed to be largely due to disturbance of the muscular sense. Von Leyden and Goldscheider[64] say that the integrity of the sensory sphere is necessary for the coördination of movement. Thus, the occurrence of sensory changes in diphtheritic paralysis, especially with ataxia, becomes a matter of some interest. Jacobi[65] says that there are in some cases sensitive changes such as to cause ataxia. He no doubt includes here the muscular sense. Lloyd[66] speaks of diphtheritic pseudo tabes under the sensory type of multiple neuritis where the muscular sense is abolished. The changes in sensation are usually slight in diphtheritic paralysis. They appear often to be limited to the ends of the extremities, as in Mott's case.[67] In some cases there is only subjective alteration in sensation. Thus, I have notes of a case of an adult in whom there was a severe faucial lesion but relatively few general symptoms, due probably to the serum treatment. During convalescence she complained of numbness and pins and needles in the feet and legs. The onset of paralysis was feared, but she never had anything more than a very slight regurgitation of fluid into the nose. In some cases where there is ataxia there may be no alteration in sensation. This was so in Rumpf's case[68] previously alluded to. On the other hand, in Hansemann's[69] case, where there was considerable ataxia, there was also impairment of sensation, including that of location. Disturbances of sensation, as unfortunately happened in my cases, do not receive the attention which they deserve, partly on account of the difficulty of investigating them in children.

Diagnosis.—There is rarely any real difficulty in recognising diphtheritic paralysis. The only cases in which doubt may arise are those in which the nature of the sore-throat has been overlooked. Cases with very slight initial lesions have ultimately come to bear some resemblance to tabes dorsalis, but the pupillary symptoms, disturbance of the bladder functions, pains, mode of onset and course should make the distinction comparatively easy. Gowers,[70] Buzzard,[71] Oppenheim,[72] Baginsky,[73] Grainger Stewart,[74] and others refer to this possible difficulty in diagnosis, but Déjerine appears to think that it may be exaggerated. A very unusual example of exceptional difficulty is recorded by Morton Prince.[75] A medical student inoculated himself while making a necropsy on a case of diphtheria. The wound became inflamed and 10 days later there was difficulty in swallowing and regurgitation of fluid through the nose. Some months later he presented some of the symptoms of early tabes. The pupils, however, reacted normally and there were no pains or bladder disturbance. The patient recovered completely, but not until after absolute rest in bed had been had recourse to. It has been stated that paralysis may be the first manifestation of diphtheria (Cadet de Gassicourt[76] and Henoch[77]). Henoch, however, adds that it is more likely that the initial lesion has been overlooked. The diagnosis might in such cases be very difficult if the diphtheritic paralysis pursued at all an anomalous course. Lindsay Steven[78] mentions that there might be some difficulty in distinguishing between Landry's paralysis and diphtheria, and one or two authors, such as Maingault,[79] say that hysteria might also give rise to errors in diagnosis.

Prognosis.—The question may first be discussed as to whether it is possible to predict the occurrence of paralysis. Apart from what has been previously mentioned as regards the kind of cases in which paralysis is more likely to supervene, it has also been stated that anæsthesia of the palate may enable the observer to foretell the onset of the paralysis some days before it appears. Cadet de Gassicourt[80] pointed this out in reference to laryngeal diphtheria. It is true that Gee[81] emphasises the fact that paralysis is very rare after laryngeal diphtheria, no doubt because the patients die before it has time to develop. All authors do not take the same view as Gee and unquestionably the serum treatment, by increasing the number of recoveries from laryngeal diphtheria, has also increased the number of cases which are likely to develop paralysis. In the first place it may be stated that recovery from the paralysis will occur if life is preserved, although several months may elapse before the patient is well. In general the prognosis of diphtheritic paralysis is good, yet the number of deaths amounts to from 12 to 15 per cent. Cadet de Gassicourt[82] and Mott[83] think that it is more fatal than is usually believed. There is reason to think that in some epidemics the mortality is higher than in others. Among a group of 275 cases reported by Myers[84] 80 died, or nearly 30 per cent. In considering more closely the question of prognosis it is well to divide diphtheritic paralysis into (1) the localised; (2) the general; and (3) the cardio-pulmonary forms. The prognosis of the localised and even the generalised forms is good, but that of the cardio-pulmonary form is bad and generally very bad. This cardio-pulmonary form may not only exist by itself but may supervene upon the generalised and even the localised forms. Hence an element of uncertainty is introduced even among the milder forms of the affection. In Cadet de Gassicourt's[85] 15 cases of the cardio-pulmonary type 14 died; in 10 of these cases the paralysis was otherwise limited to the palate. Case 1 in the earlier stages did not seem to be really serious, yet fatal respiratory symptoms soon supervened. On the other hand, some of the worst cases, especially with threatening respiratory symptoms, may recover, so that both Osler[86] and Lloyd[87] say that the outlook is not always so hopeless as the patient's appearance would indicate. This fact was well illustrated in Case 2. Mr. Woodcock, Dr. Ballantyne, and myself all thought the case quite hopeless, and yet recovery ensued.

In the cardio-pulmonary form death may occur by paralysis of the heart or respiration, including in the latter broncho-pneumonia resulting from the respiratory paralysis. Sometimes, owing to paralysis of the depressors of the epiglottis, food may get into the air-passages and even produce sudden death, as in Maingault's case,[88] or a fatal broncho-pneumonia. In cases of diphtheritic paralysis it is

[54] Archives de Physiologie Normale et Pathologique, 1884, vol. i.
[55] Deutsches Archiv für Klinische Medicin, 1877.
[56] Edinburgh Medical Journal, 1870.
[57] Dublin Journal of Medical Science, 1872.
[58] Loc. cit. [59] Loc. cit.
[60] Loc. cit. [61] Traité de Médecine, 1894.
[62] Diseases of Children, 1896.
[63] Loc. cit.
[64] Nothnagel's Specielle Pathologie und Therapie, Band x., 1895.
[65] Loc. cit. [66] Loc. cit.
[67] International Clinics, 1896.
[68] Loc. cit.
[69] Virchow's Archiv, 1889.
[70] Text-book of Nervous Disease, 1899.
[71] Harveian Lectures, 1885.
[72] Loc. cit. [73] Loc. cit. [74] Loc. cit.
[75] Boston Medical and Surgical Journal, 1889.
[76] Loc. cit. [77] Loc. cit.
[78] Clinical Lectures, 1900.
[79] Loc. cit. [80] Loc. cit. [81] Loc. cit.
[82] Loc. cit. [83] Loc. cit.
[84] Loc. cit.
[85] Loc. cit.
[86] Loc. cit. [87] Loc. cit.
[88] Loc. cit.

necessary to be on the look-out for any alteration in the pulse, such as infrequency, acceleration, and irregularity. Judson Bury [89] also states that the respiration may give warning of approaching danger. In Case 3, as mentioned above, the respiration became irregular at times. It was a disquieting symptom, but the patient recovered. Cardiac failure is not necessarily the result of an affection of the cardiac nerves. It may sometimes be due to an intense and acute degenerative myocarditis such as occurred in a case which I reported a few years ago.[90] Mott [91] has further shown that in such cases the cardiac nerves may be free from disease.

There are certain symptoms which various authors look upon as of evil import. Thus Dawson Williams [92] says that cases with paralysis of the cervical muscles or marked ataxia call for a guarded prognosis. Early and especially repeated vomiting (Gee [93] and Mackenzie [94]) is a bad sign. Very early appearance of the paralysis must give rise to considerable misgiving as regards the termination of the illness. Little further need be added upon the question of albuminuria in relation to prognosis. Case 2 with considerable albuminuria and severe paralysis recovered and Case 1 with albuminuria and apparently a less severe attack of paralysis died. Abercrombie [95] writing in 1881 described the occurrence of albuminuria in diphtheritic paralysis as a grave symptom. This statement would hardly apply where the albuminuria is slight. No doubt the presence of a considerable and persistent albuminuria would add to the gravity of the case. Other things being equal the prognosis of a case with albuminuria should be more serious than one without albuminuria, since the presence of albuminuria shows a more profound intoxication. Generally stated the prognosis as regards life is bad in the cardio-pulmonary type of diphtheritic paralysis; it is good in the localised and generalised forms, but some reserve must be expressed lest the paralysis extend to the heart or respiration. Cadet de Gassicourt [96] insists that this reserve must be made to include even mild cases of diphtheritic paralysis.

Treatment.—The first point in the treatment may very naturally be made to include the question as to whether anything can be done to prevent this formidable complication of diphtheria. Some authors strongly insist on the importance of rest. Thus Mott [97] says that paralysis is often the result of a neglect of proper treatment and rest during convalescence. The heart has been pointed out as specially liable to paralysis because it cannot rest. Collins [98] is convinced that many cases of diphtheritic neuritis would not occur if the period of convalescence were more carefully guarded. It seems to be a wise and almost imperative measure to insist upon rest, at any rate partial, until the time of the greatest incidence of paralysis is past (second, third, and fourth weeks).

I may here quote the conclusions drawn by Dr. F. Ransom [99] from a valuable experimental research conducted in Professor Behring's laboratory. He shows that paralysis may certainly be expected after intoxication with not less than one-fourth of the minimal fatal dose of toxin. With doses between one-fourth and one-eighth paralyses occur but are not constant, and below one-eighth no paralysis was noticed. The larger the dose of toxin the severer will be the paralysis if the animal survive long enough. If the paralysis is a toxic manifestation, as the experiments of Ransom and others certainly show that it is, then any treatment which antagonises this intoxication should on theoretical considerations at least lessen the liability to paralysis. It has been stated by some very reliable observers (Baginsky,[100] Goodall,[101] and Marsden [102]) that if the serum treatment were more generally adopted paralysis would be less frequent. If this could be definitely proved it would be a telling argument in favour of injecting every case of diphtheria, however slight. On the other hand, severe paralysis does occur in cases (Case 3) which have been injected and apparently sufficiently injected. Also Huber [103] states that treatment by antitoxin or otherwise has apparently no influence upon the subsequent development of paralysis. The remaining conclusions by Dr. Ransom bear very directly on this point. He continues: "Neutralised mixtures of toxins and antitoxins containing only about one lethal dose or less do not appear to cause paralysis. Antitoxin given 15 to 22 hours after intoxication with doses of toxin not greater than the lethal dose exercises a mollifying influence on the subsequent paralysis. This influence is more evident on smaller doses of toxin than on such as are but little less than the minimal fatal dose. Small doses of antitoxin have no evident effect in diminishing the paralysis." Dr. Ransom further adds: "Transferring these results to practice amongst human beings, we may expect liberal doses of antitoxin given early in the illness to influence favourably the subsequent paralysis, and this beneficial influence is likely to manifest itself not so much on the local paralysis (soft palate, &c.) as on such symptoms as failure of the heart. Severe cases are, however, likely to be followed by some paralysis in spite of even large doses of antitoxin." I set aside here purposely the question as to whether the serum treatment can be made responsible for the occurrence of paralysis, as I take it that there is no sort of reliable evidence, either clinical or experimental, in support of this view.

If rest is to be recommended in the hope of preventing the paralysis it is even of still greater importance in the treatment of this complication, both with the view of preventing its extension and in promoting recovery. Nearly all authors are in accord on this question of rest in the treatment of diphtheritic paralysis. On the least suspicion of the slightest implication of the heart absolute rest in the recumbent posture is essential. It may be well not even to let the patient feed himself. If symptoms of cardiac failure arise efforts must be made to counteract it—frequent and regular stimulation, subcutaneous injection of strychnine or sparteine (Comby),[104] ice to the præcordium (Collins),[105] galvanism, &c. Collins recommends faradaism judiciously employed. The value of electrical treatment in warding off alarming symptoms of cardiac failure is shown by a case related by Duchenne,[106] but the patient ultimately succumbed to respiratory paralysis. If the respiratory muscles fail, the faradaic current, inhalation of oxygen, and injection of strychnine may be tried. Respiratory movements may be artificially assisted. Huber also mentions tongue traction. If there is evidence of paralysis of the epiglottis (choking after food) the milk should be first thickened with isinglass (Mackenzie),[107] or the head may be bent backwards in swallowing (Cadet de Gassicourt).[108] If these fail then the tube must be used either through the nose or the mouth. Nutrient enemata may also be employed. During later convalescence massage and galvanism in short sittings and tonic remedies, including strychnine, may be useful. An American author (Mundorff [109]) suggests the treatment of these cases of paralysis by the injection of anti-diphtheritic serum and he relates two cases in support of his views.

Leeds.

[89] Allbutt's System of Medicine, vol. vi., 1899.
[90] THE LANCET, Jan. 25th, 1896, p. 226.
[91] Loc. cit.
[92] Diseases of Children, 1898.
[93] Loc. cit.
[94] Loc. cit.
[95] Transactions of the International Medical Congress, 1881.
[96] Loc. cit.
[97] Loc. cit.
[98] Loc. cit.
[99] Journal of Pathology, July, 1900.
[100] Brit. Med. Jour., vol. ii., 1898.
[101] Ibid.
[102] Ibid., Sept. 8th, 1900.
[103] Loc. cit.
[104] Thérapeutique et Prophylaxie des Maladies des Enfants, 1900.
[105] Loc. cit.
[106] De l'Électrisation Localisée, 1872.
[107] Loc. cit.
[108] Loc. cit.
[109] Medical Record, 1896.

THE DIAGNOSIS OF PLAGUE.

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IN view of the sinister fact that the long-expected has at last happened and that the British Isles at the time of writing show a focus of indigenous plague in the city of Glasgow, a short notice on the diagnosis of plague from the practical point of view of one who has been working at it in India for the last three years may not be out of place. Two diametrically opposed views are constantly expressed on this subject: that nothing can be more clear, definite, and easy to recognise than plague, and that no disease is more difficult to follow in its multiform varieties. The fact is that both opinions are partly true. To one who has had practical experience of an epidemic of plague the majority of cases are as unmistakeable as fracture of the thigh would be; but a small proportion will remain, to come to a

clear decision regarding which may tax to the utmost the powers of diagnosis of the practitioner, as may be gathered from the definite instances which later I will give. On the other hand, a man who is devoid of experience and has seen no plague, unless he is particularly on the alert too often fails as completely to recognise a perfectly typical case as would a herbalist if confronted with an incipient case of locomotor ataxy. The statement may sound alarming and may be regarded as a distinct slur on the profession, but unfortunately it is founded not on a little personal experience in Calcutta but on a survey of epidemics of plague in every country. In going over the records it will be found that almost every outbreak, whether in Oporto, Buenos Ayres, Bombay, or Calcutta, has been ushered in either by a series of unrecognised cases or, if they were recognised at the time, by an outburst of popular denial supported very often by men of distinct standing in the profession. A very good example is to be found in the "Report on the Malignant Fever called Pali Plague," 1838. The medical men who investigated the disease on the spot were unanimous and uncompromising in their diagnosis of the disease as "Levantine plague," as it was called then, and their detailed reports are identical with the clinical records of the present epidemics in India. But Dr. Ranken, secretary to the Bengal Medical Board, who prepared the general report, sums up thus: "The affection of the glands is the sole peculiarity of the Pali disease as an Indian fever, and there are facts which prove that symptom to be no diagnostic or necessary attendant of the plague. The affection of the glands often does not appear in marked cases of the Egyptian pest, and it has been observed, however rarely, in all the types of fever known in Europe, North America, and the West Indies. The Pali disease is therefore not plague in the sense of modern authors and teachers, implying its derivation directly or indirectly from Egypt or the Levant by specific contagion, but a fever which local causes produced and circumstances rendered malignant and infectious."

Many similar instances will be found noted in a paper by Professor W. J. Simpson in THE LANCET of April 14th, 1900 (p. 1063), and without going into detail it may be stated that they have been far from uncommon in Calcutta. The latter are better left alone, but it may be permissible to cite a couple of cases as instancing how in their inexperience the very best men may fail to recognise the most clear and well-defined cases. In investigating a case of illness I gathered from the contradictory and unreliable statements made by the friends of the patient that they had suspected the illness to be plague. When the case was followed up to one of the leading Government hospitals in Calcutta—one where a special plague ward had just been instituted—it was found to be a case of typical plague pneumonia, but the patient was lying in an ordinary ward with a diagnosis of fever with pneumonia. The case had entirely escaped suspicion, though when attention was called to it the diagnosis of plague was made at once and the patient was removed to the plague ward. Again, a leading surgeon, a man with an established European reputation, was called to see in consultation a typical case with parotid bubo. He confirmed the diagnosis of the attending native physician—erysipelas. Some time afterwards he admitted his mistake and explained that in his inexperience he had thought it impossible for a case of plague to show so much cellulitic œdema round the gland. Similar instances might be multiplied indefinitely, but enough has been said to make it clear that until practical experience has been gained the average practitioner is very liable indeed to let the disease pass quite unrecognised. Unfortunately it is only during the period when he still has this experience to gain that it is so essential for him to recognise cases. It is of little use, comparatively, to recognise cases when an epidemic has got well started, because the almost universal experience in large cities has been that the disease spreads so widely and rapidly that the exhaustive application of preventive measures becomes almost impossible and the eradication of the disease entirely so. But if the early cases are at once detected, if no case is allowed to pass unrecognised, then there is every prospect that if strict measures are rigidly enforced the disease may be prevented from gaining a foothold. With this consideration in view the necessity will be understood for dwelling at length on clinical facts that to one with any knowledge of the disease will seem ridiculously plain and self-evident.

GENERAL CHARACTERISTICS.

The disease may be defined as an acute epidemic septic disease due to bacillus pestis and generally characterised by the presence of buboes or glandular swellings. The word "septic" is used in its general application, regardless of whether the organisms themselves or only their products are circulating in the blood,[1] for the clinical entity called loosely by the word "sepsis" is one of the most universal and characteristic features of the disease and forms an excellent foundation from which to build up a complete picture of it. Think of the general characters of an acute case of puerperal septicæmia and you have an idea of the general characters of the typical case of plague. Where buboes are not present—and this may be in a large proportion of the cases, amounting in the epidemic of 1900 in Calcutta to about 30 per cent. in my district—this acutely septic character is the chief basis of diagnosis. Where the septic characters are wanting or are little marked, as they are in a small proportion of cases, the bubo is generally sufficiently characteristic to guide the practitioner. Several varieties of the disease are described, but it must be borne in mind that the different types overlap so much that in individual cases one might be justified in classifying the case under almost any or all of the headings. The types recognised are as follows: (1) the bubonic, (2) the pneumonic, (3) the septic, (4) the intestinal, (5) the meningeal, and (6) the carbuncular. Before taking up these types in detail it will first be necessary to consider the diagnostic characteristics common to all. The onset of the disease is almost invariably sudden, without premonitory symptoms. Very rarely I have seen the onset gradual, so that the patient could go about his business for a day or two. The intensity and rapidity of the course of the disease are such that excepting cholera there is hardly any other disease likely to produce so grave a general condition within so short a time. The tongue is of considerable diagnostic value. The characteristic feature is that while the dorsum is coated, the edges, the tip, and often the median raphe remain pink and clean, sometimes getting red and dry. The coating is at first rather thin and white as a rule. It may be yellowish and in severe cases it generally becomes brown. Whether white or brown the edges and the tip remain typical. When the last epidemic was at its height and cases were very rapidly fatal I several times saw tongues yellowish brown from the very onset, but this is exceptional and the silvery white tongue is the rule. The pulse is the most valuable factor in diagnosis. Over and over again it will put one on the track when confronted with an abnormal case with very mild general symptoms, for it is invariably fast and out of proportion to the general condition of the patient. A preliminary stage of fulness is sometimes described,[2] but it is very evanescent and within a few hours the pulse becomes quick and feeble, 100 a minute in a mild case and 120 in the average case, and frequently up to 140. It is very compressible and it tends to become rapidly dicrotic and running. Intermittency is common and is generally a very fatal sign. Eventually it becomes difficult or impossible to count. It is a pulse, in short, that almost from the very beginning indicates the presence of some acutely toxic condition, a pulse that might be expected towards the conclusion of a fatal attack of enteric fever rather than after an illness the duration of which is to be reckoned in hours. Though not so constant a feature as the rapid feeble pulse, muscular incoördination is very common and is of great diagnostic importance. The gait is staggering and drunken and the speech is thick, slow, hesitating, blurred, and halting. Sometimes complete aphonia is met with during the illness. Captain Thompson, I.M.S., records seven cases of development of aphonia after convalescence.[3] Early in the disease the face is drawn and anxious-looking and the corners of the mouth are drawn down in an expression of extreme weariness and pain. Later in the disease, or sometimes from the beginning, the face is blurred, heavy, stupid, and expressionless. As to the mental condition of the patient, he is as a rule heavy, drowsy, stupid, and incapable of answering questions or of taking an interest in what is going on around him. He will put out his tongue, but only when he is shouted at. This condition gradually deepens into stupor and coma. Delirium is generally present, especially at night, commonly it is low and muttering, but sometimes very violent. The very early onset of the stupor or delirium is a valuable characteristic. At the same time it must be remembered that it is by no means constant. I have frequently heard the statement made: "Oh, it cannot have been plague, for he was conscious all along." I recall a case where the duration of

[1] Vide Hamilton's Pathology, vol. ii., p. 1018.
[2] Condon: The Bombay Plague, 1900, p. 73.
[3] General Gatacre's Plague Report, 1896-97, p. 65.

illness was only 24 hours, and there was just time for the femoral bubo to begin to appear before the attack ran its course. Yet the patient, a child-wife, aged 13 years, put out her tongue and told me her name three minutes before she breathed her last. Her feet and hands were already cold, and she was *in articulo mortis*. Another case was seen on the sixth day of illness in the following condition: there was a large left axillary bubo, the pulse was 150, the temperature was 103° F., the breathing was stertorous, and liquid râles were heard from the bedside. Yet the patient was sufficiently clear mentally to recognise me as the plague medical officer, to make a last pitiful effort at concealment with the words, "I am all right; I am not ill at all," and to refuse to allow me to examine his chest. This was within a few hours of his death. Again I have seen an English-speaking Eurasian solicitor on the fifth day of his illness within 12 hours of his death perfectly conscious and rational. The femoral gland had begun to subside and his condition was such that the medical attendant thought the attack done with and demurred strongly when I gave an absolutely bad prognosis based on symptoms of pneumonia in both apices. The daughter of the patient was taken ill on the same day as the father and she died at the same hour, yet 12 hours before death she had been conscious and rational and her speech was unaffected, and the mother, complaining that she could not keep her in bed, asked me to talk to her and to scold her, while the sign of approaching death was written plainly in a distinctly intermittent pulse of 120. In this case, too, the femoral gland was beginning to subside and had lost its tenderness. Such cases are rather exceptional, but I have dwelt on them because it seems very generally to be held that a plague patient must necessarily show cerebral derangement and that if it is absent the case cannot be plague. This contention was the turning-point of a will case in Bombay. Conjunctival congestion is a very fairly constant feature. The whites of the eyes may look quite red, while at times they may only be muddy. It is of value particularly where one has to diagnose a case from the history solely. The temperature in plague is so irregular that it is of very little diagnostic value. It tends to be very high (from 103° to 105° F) but it is liable to irregular remissions particularly on the second or the third day. Recovery is generally by rapid lysis, rarely by crisis. The normal is generally reached from the fifth to the seventh day.

THE BUBONIC TYPE.

The typical plague bubo is, as a rule, remarked within 24 hours of the onset of the attack by pain, tenderness, and a gland from the size of a bean to that of a walnut, most commonly in the parotid, cervical, axillary, or inguinal region. Within 24 hours, as a rule, the gland can no longer be distinguished and is lost in a boggy œdematous swelling which varies, as a rule, from the size of an egg to that of a large orange. This swelling is generally painful and is always tender, sometimes acutely so. At times it may be hard and brawny, but the soft boggy feeling is most characteristic with no well-defined limits; occasionally, particularly in the cervical and parotid region, the swelling may be very diffuse, suggesting cellulitis or erysipelas. I have seen the whole of the triangles of the neck filled up. The skin over the bubo, which is at first normal in colour, may get dusky red, at first freely moveable over the swelling, but latterly incorporated with it as a rule.

The glands.—It may happen that the gland does not go on to form a bubo, but remains distinct and of moderate size; this is particularly so in the septic type. Chains of matted glands may be found. A practical point is that glands may be *deep*, particularly in the femoral region and may be overlooked unless carefully felt for with deep pressure. From their exquisite tenderness they will often thus be found. I have frequently seen a patient who was almost comatose and who could respond to no other stimulus start with a cry when pressure was made over the site of a gland too deep, perhaps, to be felt clearly. Another point is that the appearance of glands or of a bubo may be delayed. Captain Thompson says that 70 per cent. appear on the second day, 15 per cent. on the third day, 12 per cent. on the fourth day, 2 per cent. on the fifth day, and only 1 per cent. on the sixth day. I have seen one on the fifth day and one remarkable case on the tenth day. The patient had all the general symptoms—stupor, high temperature, &c.—but repeated examinations failed to reveal either glands or pneumonia till on the tenth day a typical femoral bubo developed.

Unusual site.—This should cause no difficulty, for buboes may be found practically wherever glands exist. Dr. McCabe Dallas records 31 different combinations of single or multiple buboes, not to speak of nine different combinations with pneumonia, and Captain Thompson records one in the right popliteal and the calf of the leg, one in the left popliteal, one in the right brachial, one in the right forearm, two in the scalp, and three in the mammary gland out of a total of 304 cases. Out of 193 cases observed directly I have noted one in the right pectoral fold, one in the left pectoral fold, one in the mamma, one in the right sub-occipital, two in the right testicle, and one in the symphysis pubis, and among cases investigated after death I have noted two in the testicle, one in the mamma, and one in the right elbow. The deep glands of the trunk, such as the lumbar, bronchial, and mesenteric glands, may be affected, but they are more of pathological than of clinical interest.

THE PNEUMONIC TYPE.

Plague pneumonia may be primary or secondary, that is to say, appearing as a complication in a case with a bubo. It is so very liable to go undiagnosed that it is difficult to say what proportion of plague cases may be of this variety,[4] but after paying particular attention to the subject I came to the conclusion that it was about 30 per cent. of the 2237 cases in my district of Calcutta. Of the 194 cases actually observed no less than 32·48 per cent. showed respiratory symptoms. Of those 62 per cent. were primary pneumonia; in 25 per cent. it was doubtful whether it was primary or secondary, and in only 13 per cent. was it clearly secondary to buboes; 50 per cent. showed a bubo in addition to the pneumonia. Of the 64 cases only three (less than 5 per cent.) recovered, and one of those mainly, I think, as the result of an immediately antecedent plague inoculation. The figures as to the frequency of pneumonia may possibly be challenged, but as to its excessive mortality all are agreed. The leading and most diagnostic point about this variety is that while the general symptoms of the disease are exceptionally grave and exceptionally rapidly developed the local lung symptoms and the results of physical examination are so very slightly marked that they can often be detected only after a most careful examination. The disease, in short, is of an intensely septic type and the lungs show little of the signs of consolidation of ordinary pneumonia as a rule. In fact, many of the cases which I have called pneumonic might by another observer have been called septicæmic. In this connexion it may be noted that the returns for the Medical College Hospital, Calcutta, for 1898 showed that out of 98 cases 10 were pneumonic, 20 were septicæmic, and in four cases there were both buboes and pneumonia[5]—that is to say, that 30 per cent. of the total cases were non-bubonic. My figures for the epidemic of 1900 are 193 cases with 44 cases non-bubonic, but only 11 of these 44 were septicæmic. In reality the number of septicæmic cases should be even less, as I know that in some of them in a second examination I made out lung symptoms, but in the rush of work no record was made. The presumption from these figures is that Captain Evans, who compiled those returns, would have made some of my pneumonic cases septicæmic and *vice versâ*, but, at all events, this fact is brought out clearly, that in Calcutta the proportion of non-bubonic cases is very high. The precise designation is a matter of secondary importance, particularly as in his very valuable pathological report Captain Evans gives his opinion that plague pneumonia is due to infection from the blood rather than from the air-passages—that is to say, that the pneumonia is simply the expression of a septicæmia. The main facts pointing to a case being plague pneumonia, in addition to its generally septic character, which has already been sufficiently described under general symptoms, are as follows. Cough may be very slight and occasional. The breathing, taking into consideration the high temperature, is little hurried or laboured, and the ordinary pneumonic disproportion of pulse and respiration rate is reversed. The pulse is the rapid feeble septic pulse already described, probably 120 per minute. The sputum, like the cough, tends to be very scanty and occasionally so much so that in very many of my cases there was no opportunity of seeing it. As a rule it is clear and mucoid, very like bronchitic sputum. Occasionally it may be faintly muco-purulent. Rusty sputum I have only seen once, and it was welcome as I had just shown the case

[4] Major L. F. Childe, I.M.S., V. (1), p. 109

[5] Captain C. H. Evans, I.M.S., Plague Commissioners' Report, vol. i., p. 244.

to a medical sceptic who on the strength of a first expectoration, bronchitic in character, had declared the case to be simple bronchitis. The rusty sputum came only after forced coughing. Blood in the sputum I have seen twice. In one case there was a history of almost hæmorrhage from the lung. Prune-juice sputum I have never seen.

Physical signs.—Very frequently on the first day or two of illness it will be found impossible to make out anything abnormal in the chest. Then will be found probably in one or both apices a small patch some two inches in diameter with bronchial breathing and increased vocal resonance and a few fine moist râles. Dulness on percussion, as a rule, is very faint, if made out at all. The rest of the lung will probably be normal, but an occasional râle or rhonchus may be made out. All the signs given may be very faint and over a very small area, but if present at all, however faintly, they may be taken, as far as my experience goes, as almost inevitably indicating a fatal result. So often has it been only after repeated examinations that such a patch has been found, and so liable is it to be overlooked, that I am inclined to call any case pneumonia as soon as I find cough present and to assume that the patch has either been overlooked or else is too deep in the lung to cause definite physical signs. The result of post-mortem examinations as recorded by Major Childe, Captain Evans, and others in their reports supports that view, patches of from the size of a walnut to that of a pea being described. Of course, at times the patches are widely distributed over the lungs and may form a consolidated mass over the greater part of one lobe giving clear physical signs, but in my experience this is not common. Other observers, while agreeing for the most part with my description, lay less stress on the paucity of physical signs and describe the sputum rather differently. Thus Major Lyons, I.M.S., says: "The expectoration is diagnostic from that of ordinary broncho-pneumonia, it being less viscid from the first, and early becomes profuse and watery and generally tinged with blood or reddish from admixture of blood."[6] Major Childe makes it "loose and free, coming up with the slightest cough, looking more like serum than mucus, and it was slightly pink, not rusty-yellow at all." "It is not always as described"; it may be "much less profuse," "and in some cases the presence of blood is a marked feature." Captain Thompson makes it "seromucoid, scanty, and occasionally tinged with blood." Dr. McCabe Dallas describes it similarly. All, however, note the comparative absence of dyspnœa. I have described a form noted in the epidemic of 1899 where the general symptoms were very mild, rather bronchitic in character, and only the excessive pulse-rate and the unexpected fatal termination gave the clue, but in the epidemic of 1900 such cases were not common.[7] The duration of these cases may be up to 10 days.

Bacteriological examination.—Major Childe states that cultures can always be obtained from the fluid from the trachea and bronchial tubes. Personally I have had little opportunity of testing this, as, in the words of Captain James, "none of us had time for laboratory or investigation work. The time of a plague medical officer is far too occupied for leisure for scientific research."[8] On the few occasions upon which I have tried to cultivate from sputum only mixed cultures from ordinary mouth organisms were recognisable.

THE SEPTIC TYPE.

This type of plague is best described as plague where neither glands, buboes, nor pneumonia can be detected. Major Childe describes a definite condition of multiple affection of the glands, but those are more likely to be detected in the post-mortem room than at the bedside. Moreover, they are to be found along with typical buboes.

THE INTESTINAL TYPE.

Less than 5 per cent. of the investigated cases were of this type. They were generally registered as cholera, but the high fever and the bloody nature of the stools put this out of the question. Dr. E. C. Pettifer, my colleague, has seen a case with 30 motions a day and a bubo in addition. The diarrhœa in ordinary bubonic cases may be very marked. In District 10 in the epidemic of 1896-97 in Bombay the proportion of this type is put down as 3 per cent.[9] The stools are generally described as thin, yellow, and bad smelling. Major Gibbons, I.M.S., has described to me a case where the bowel on post-mortem examination was full of black blood. It is a very severe and rapid type as a rule, thereby distinguishing it from typhoid fever or dysentery; in cholera one would have the coldness, collapse, and rice-water stools.

THE CEREBRAL TYPE.

I have called this cerebral in preference to meningeal, as in so many cases where the symptoms would have led to the expectation of finding at the post-mortem examination gross meningeal or cerebral lesions none have been present. Sometimes, however, distinct signs of meningitis are present, according to Captain Thompson 0·66 per cent. He says: "The frequent presence of cerebral disturbance and the rarity of true meningeal inflammation would seem to prove that the symptoms depend on toxæmia."

THE CARBUNCULAR TYPE.

This type of plague is rare. In the last epidemic I only saw one case of it and in the previous epidemic only three cases. What struck me in most of those cases which I did see was the superficiality of the swelling and the fact that the induration was marginal rather than deep, also there were no deep excavating sloughs, but only a shallow widespread sloughing of the skin. Dr. K. C. Bose, C.I.E., has remarked the same thing. At the same time I have seen very deep excavation of the thigh in Calcutta and another huge excavation in the lumbar region in Poona. Captain Evans got cultures from a carbuncle on the face, but does not describe it. Our knowledge of this type is at present deficient, and our diagnosis must rest mainly on probability and the excessive gravity of the symptoms compared with the size of the carbuncle. One case of this type was seen by a number of medical men, the diagnosis of plague made by the district medical officer having been questioned. At least one of those gentlemen declared the man to be suffering from simple boil on the buttock, and all came to the conclusion that it was not plague. Nevertheless the man died within 24 hours.

DISEASES LIKELY TO BE CONFOUNDED WITH PLAGUE.

It must, in the first place, be remembered that there is hardly one of the specific fevers in which glandular swellings do not occasionally occur even if rarely and that in an epidemic of no matter what disease there is the liability to have abnormal and malignant cases of very short duration that approximate plague in general characters: for example, a case of measles with meningitis. In such cases probability must be taken into account. I shall only mention those diseases which have actually been mistaken for plague in Calcutta or have at least caused difficulty.

Puerperal fever.—Plague in pregnant women almost invariably causes abortion or premature delivery. The point to be noted, then, in puerperal fever is whether the fever has come on before the onset of labour: such a case must be looked upon as suspicious. Plague under such conditions is very liable to be overlooked.

Septicæmia.—In septicæmia the diagnosis is bacteriological or by probability.

Pyæmia.—I recall a case where even at the post-mortem examination the diagnosis was not clear whether it was pyæmia or plague, incipient pus formation being evident in the gland substance of the mamma and about the glands of the neck. Cultures settled that it was plague. Another case was diagnosed in hospital as pyæmia and sloughing of the scrotum, but I still maintain that it was plague for the following reason. With the onset of fever came a right axillary bubo. On the third day glands appeared in the left inguinal region and swelling of the left testicle. By this time the axillary bubo had almost entirely subsided. This rapid subsidence I have seen more than once in cases of multiple bubo, but it is highly improbable that a pyæmic swelling in a case like this, which went on to a fatal termination, would thus resolve.

Small-pox.—I have once diagnosed small-pox as plague and have twice seen it thus diagnosed. The advent of the eruption, of course, made the correct diagnosis clear.

Influenza.—The more malignant forms of influenza are extremely difficult to distinguish from plague without buboes for the leading characteristics of both diseases are the same. In both nervous disorders are predominant and in both the pneumonia is lobular and ill-defined; sweats are highly

[6] Major Lyons, I.M.S., p. 78, V. (1).
[7] An Undescribed Form of Plague Pneumonia, Brit. Med. Jour., February, 1900; Journal of Tropical Medicine, 1900.
[8] Report of the Outbreak of Plague in the Jullunder and Hoshiapur Districts of the Punjab, 1897-98, p. 147.
[9] Gatacre's Report, p. 138.

characteristic of influenza, but may not infrequently be seen in plague.[10]

Cerebro-spinal meningitis.—This, like the last-mentioned disease, I have also mistaken for plague. Meningeal symptoms are common in plague, but actual meningitis is rare. Hence one would not expect the extreme retraction of the head seen in cerebro-spinal meningitis. The symptoms also would not probably be relieved by lumbar puncture.[11]

Diphtheria and angina.—If the mouth can be opened there should be no difficulty. I saw a case on H.M.S. *Eclipse* of angina where the swelling of the submaxillary and cervical glands was so marked that the throat could not be examined, and owing to the severity of the general symptoms the case was at first looked upon as being very suspicious.

Erysipelas.—It must be remembered that diffuse cellulitis often complicates plague. I have seen the hand, the arm, and the shoulder affected. In another case when the left parotid bubo was subsiding there started from the right parotid a very œdematous cellulitis that passed over the vertex above, closed the right eye completely, and passed completely round the chin to the left side below.

Measles.—Twice I have seen morbilliform eruptions. They appeared about the tenth day when the patients were becoming convalescent. In one case this eruption became eventually hæmorrhagic.

Gonorrhœa.—As a rule there is little difficulty with this condition, but the following extraordinary case sent me completely astray. I went to examine a case reported by a very reliable practitioner as plague. To my surprise I found the patient sitting up in bed, talking freely and apparently free from fever. His appearance and symptoms seemed so incompatible with plague that when I had verified the presence of an inguinal bubo I naturally asked as to any history of gonorrhœa. The answer was to unwrap a penis swimming in pus. The case seemed clearly to be one of gonorrhœal bubo; either the medical officer had made a mistake or, what seemed more likely, the wrong patient had been shown me. However, within 24 hours of my visit the man died. On subsequent visits I got the true history of the case. The man after repeated contact with plague cases had suddenly got ill, a bubo developed, and for four days before my visit he had very high fever and delirium. On the morning of the day on which I saw him the temperature dropped for the first time and the symptoms subsided with the fever. In the evening the temperature again rose to 104° F., he became delirious, and on the next day he died. The urethral discharge was due to a chronic gleet which he had had for years and which got better and worse.

Syphilis.—Plague complicating syphilis is not uncommon. In Poona a man had been in the segregation camp for three or four days with a large hard sore on the penis and a couple of buboes, when suddenly he developed high fever and grave symptoms. I sent him to hospital as suffering from plague and the diagnosis was confirmed there. I have a history of an exactly similar case.

Mumps.—Occasionally mild cases with parotid swelling are presented for diagnosis, which may be very difficult to distinguish from mumps unless taken in connexion with previous and subsequent cases. The most marked case of this which I have had was that of a groom, aged 30 years, who was taken ill on Feb. 8th, 1900. Two days later he was seen walking about with two parotid buboes, a temperature of 101° F., and a pulse-rate of 120. He walked, talked, and moved about with the greatest freedom. On that same day he did his ordinary duty in riding horses. On the next day both glands had almost disappeared and with the exception of a little yellowish coating on the back of the tongue he was all right. There had previously been suspicious deaths in this collection of huts and in the next two months there were numerous cases. Most observers believe such cases to be plague, but it has yet to be proved.

Malaria.—This generally causes little difficulty. The edges of the tongue are not clean. In one case the patient had only four days previously recovered from an attack of malaria and was thin and anæmic. The temperature was 103° F., the pulse was 120, and the white tongue coating covered the tip and edges of that organ. No glands or pneumonia could be made out and the probable diagnosis seemed to be malaria; but as rats had been found dead in the house, and as his master wished it, he went to the hospital. He developed a bubo there.

Cerebral embolism and scrofulous glands.—These conditions have once caused difficulty.

Captain Thompson under "Diagnosis" notes many of the diseases given, and in addition mentions the following: epilepsy, cerebral apoplexy, uræmic coma, ulcer with sympathetic glands, diarrhœa, debility, marasmus, and phthisis. Major Lyons mentions relapsing fever, typhus fever, and alcoholic poisoning.

Bacteriological Diagnosis.

Undoubtedly this is the great stand-by in diagnosis of plague, but this paper is already sufficiently long without taking it up. Moreover, in Calcutta the conditions of work have been such that we have had to work without the aid of either post-mortem examinations or cultures. The following practical points may, however, be mentioned. Puncture of a gland for diagnostic purposes is to be avoided unless in cases almost certainly fatal, for there is a risk that a simple case may be transformed into a septicæmic case. Cultures from the blood, the finger-tip, are not to be expected unless in virulent cases or shortly before death. Owing to the almost insuperable difficulty of separating the bacillus from mixed cultures there is a possibility of failure in an attempt to cultivate it from sputum, owing to the growth of ordinary mouth organisms. Major Lyons, however, says that "the presence in all cases of immense numbers of plague bacilli in the sputum, from which cultures can be obtained, renders the diagnosis certain." Judging from the results obtained in rats it is advisable that post-mortem cultures should be made, if possible, within 24 hours after death. The bacillus is not to be found in the pus of a bubo.

Calcutta.

[10] Hossack: Mixed Infection in Houses of Plague and Influenza, Brit. Med. Jour., Oct. 27th, 1900.

[11] Ibid.

LANDRY'S PARALYSIS.

By P. RHYS GRIFFITHS, M.B., B.S. Lond.,
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Opportunities for observing the very interesting condition of acute ascending paralysis occur very rarely and it is for this reason that I wish to record the following case.

The patient was seen in consultation with his medical attendant, Dr. D. E. Powell of Cardiff. He was a tall, well-developed man, of dark complexion, 32 years of age. He was engaged as a railway guard. His wife told me that for a fortnight before the attack came on he had not been well. There were no special symptoms, but he complained of weakness and general malaise. He sent for his medical attendant on account of severe pains in the legs. At the time there was an epidemic of influenza and he was treated for this disease, but his condition gradually becoming worse he was seen by his medical attendant's partner on the evening before I visited him. They diagnosed Landry's paralysis and very properly expressed a grave prognosis.

When seen by me the patient was extremely ill and I was not able to make so thorough an examination as I should have desired. He was sitting propped up in bed supported by a friend and his face expressed considerable distress, but his mental functions were unimpaired. His breathing was very short and he told me that he was choking and that he was unable to swallow. He was given some milk and brandy, which he was quite unable to swallow.

On examination I found that his lower extremities were completely paralysed. His abdominal muscles were flabby and evidently paralysed. There was some slight movement of the chest, but the breathing was mainly diaphragmatic. There was well-marked paresis of the upper extremities and he was unable to control the movements of his head. There was no paralysis of the muscles of the face or of the muscles of the eye. His deglutition was seriously affected. Cutaneous sensibility, though not abolished, was notably blunted. His power of localising light tactile impressions was much impaired. No observation was made with regard to temperature or electrical skin reactions, nor was any attempt made to ascertain the electrical condition of his muscles. The sphincters were said not to be affected. The exact duration of the paralysis was uncertain, but as far as I could ascertain it must have been two or three days. It began in the legs

and rapidly spread upwards. The pulse was rapid and feeble. His temperature had generally been about 100° F. He died a few hours after he was seen by me, the cause being stated to be asphyxia. I was unfortunately not able to secure a post-mortem examination.

In several of our text-books it is stated that Landry's paralysis is a rapid general motor paralysis, usually starting in the lower extremities without any very marked implication of the sensory apparatus. In looking up the notes of the historical case which occurred in June, 1859, upon which the definition of this disease is in the main based, it is stated that the senses of pain and temperature and the electrical sensibility were not affected, but that the muscular sense was lost in the feet and toes and tactile sensibility was diminished in the distal segments of the limbs and completely lost over the tips of the fingers. Landry states further that "sensibility and motility may be equally affected." Tactile sensibility was very markedly and very generally affected in my case.

I think it highly probable that the disease was the result of influenzal toxæmia. Dr. Powell had no doubt that he was dealing with the ordinary form of influenza for some days antecedent to the onset of the paralysis.

Various other causes are given—e.g., exposure to cold and alcoholic excesses. It has been attributed to the poisons of specific fevers, such as small-pox, typhoid, measles, diphtheria, syphilis, and septicæmia. It occurs more often in men than in women, the ratio being three to one. It is a disease chiefly of adult life. The onset may be abrupt or it may be preceded by a variety of premonitory symptoms, mainly of a sensory character. Occasionally they may also be motor or the disease may be ushered in by a feeling of general malaise. The feature which overshadows everything else is the progressive diminution of muscular force, the finer movements disappearing first to be followed by the grosser. Although the feet are generally implicated first, yet this order may be varied by implication of the upper before the lower extremities. In about one-half of the cases the cranial nerves are affected. The nerves most often affected are those supplying the muscles of speech and deglutition. In some cases the soft palate alone is, or the soft palate and the epiglottis are, paralysed; in others—and this was a marked feature in my case—the pharynx and the œsophagus are also involved. Facial paralysis has been observed and also paralysis of the extrinsic and intrinsic muscles of the eye. Dr. Judson Bury states that the plantar and other superficial reflexes are probably lost. In my case there was no doubt that these had disappeared. The diaphragm is said to be generally involved before the intercostal muscles. I feel quite sure that this was not so in my case. The actual death-rate I do not know, but it is certainly very high. Dr. Judson Bury states that in 60 per cent. of the fatal cases death occurred before the tenth day; in 40 per cent. it occurred in two, three, or four weeks; occasionally it is fatal in two days.

The pathology of this disease is at present obscure. In some cases no changes have been noted in the cord or nerves; in others the changes were those usually met with in myelitis; while in a further set neuritis of the peripheral nerves has been the main feature.

Cardiff.

ICHTHYOL AND ITS USES IN SOME SKIN DISEASES.

BY ALEXANDER BROWNLIE, M.D. EDIN.

IN publishing notes of some typical cases of eczema and acne treated with ichthyol I would point out that the results have been obtained in private practice, and not in hospitals, where patients have the advantage of trained nurses and resident physicians.

ECZEMA.

Ichthyol, whether administered internally or applied externally, is, in my opinion, one of the most efficient agents in our hands for treating eczema in all its stages. The cases now quoted to show its value are not taken in any prescribed order but are selected at random from my note-book. The first case which I quote is the first in which I employed ichthyol, and as at that time my knowledge of the substance was limited my notes are naturally fuller of detail than in subsequent cases.

CASE 1.—The patient was a man, aged 33 years, married, with five children. When he was 16 years of age he had severe hæmorrhage during an attack of typhoid fever. He was of strumous constitution and had suffered from eczema for two years before seeing me in February, 1895. His face and neck were acutely eczematous, weeping, painful, and itchy. On the flexor aspects of his arms and thighs there was a drier form of eczema. His tongue was furred, he was constipated, and he had no appetite. I ordered light diet and gave internally a mixture containing nux vomica, liquor arsenicalis, and chiretta. The following ointment was applied externally twice daily: salicylic acid, five grains; ichthyol, 30 minims; resorcin, 20 grains; powdered boric acid, 30 grains; powdered starch, 60 grains; and vaseline to make up two ounces. On Feb. 17th there was no improvement and the itching was very bad; the ointment was also said to cause pain. I therefore stopped it and used the following: subnitrate of bismuth, two drachms; oxide of zinc, one drachm; ichthyol, 30 minims; and vaseline to make up two ounces. On the 21st there was still much itching. On the neck large brown epithelial scales were beginning to peel off. On the 26th, the arms and legs being dry, I prescribed 20 per cent. ichthyol paint in distilled water, which relieved the itching better than anything previously tried; 15 grains of trional were also given each night. On March 14th the neck and face showed some improvement, the exudation and pain being less. I now gave two and a half grains of ichthyol in a pill three times a day after food. On the 29th there was a distinct improvement. There was no more exudation and there were no papules on the face. For washing his face the patient used 10 per cent. ichthyol soap, and the ointment was changed to simple 4 per cent. ichthyol lanoline salve. By the middle of April the arms and legs were distinctly better, but the face and neck still showed some redness and a few papules. In May the patient was sent to Harrogate and he returned greatly improved in general health. The only symptoms of eczema now remaining were a slight scaliness of the neck and itching in parts which were quite healed. I therefore sent him to Dr. Allan Jamieson of Edinburgh, who prescribed a carbolic acid and spirit lotion with a weak ichthyol and resorcin ointment. The itching was not relieved at once but it gradually wore off. Any slight recurrence during the next two years was quickly subdued by 5 per cent. ichthyol salve. For the last three years he has had no more attacks.

CASE 2.—This patient was an unmarried man, 26 years of age, who was suffering from eczema of the leg, not varicose. Above the ankle there was a large red itchy patch, showing serous exudation. The treatment was commenced on Feb. 21st, 1895. The part was directed not to be washed with soap but with oatmeal water. Ichthyol in five-grain doses was given internally twice daily, and the following ointment was applied externally: ichthyol, 30 minims; subnitrate of bismuth, two drachms; oxide of zinc, one drachm; powdered starch, two drachms; and vaseline to make up two ounces. On March 1st the patient's condition was much improved. There was now no pain and no weeping, but the part was dry and scaly. A lotion containing 50 minims of ichthyol in an ounce of water was applied twice a day. On the 14th the skin was normal and the patient considered himself to be quite well. He has never been troubled since.

CASE 3.—This patient was a man, 68 years of age. He had a slight tendency to gout, but beyond this there was nothing particular either in his own history or in that of his family. The treatment was commenced on May 5th, 1899. There was eczema of the right leg, which from the knee to the toes was swollen to twice its usual size, pitted on pressure, was everywhere red, inflamed, and weeping, and in many places was covered with crusts, which on being detached left an exuding red surface. On the right hand and arm there were small patches of dry and scaly eczema. Complete rest was ordered with elevation of the leg. A five-grain ichthyol pill was given thrice daily after food, and a mixture containing strychnine and digitalis to improve the circulation was ordered. The following ointment was applied twice a day: subnitrate of bismuth, three drachms; ichthyol, 24 minims; and oxide of zinc ointment to make up two ounces. On the 22nd the swelling, pain, and weeping were reduced, and large brown scales were detachable. The arm and hand were treated with 10 per cent. ichthyol lanolin salve. On June 10th the swelling was almost gone and the leg was in a

dry and scaly condition, except at a small spot on the back. The following ointment was then applied: ichthyol, one drachm; ammoniated mercury, 10 grains; resorcin, 20 grains; vaseline, one ounce; and lanoline to make up two ounces. On the 19th the leg was normal in size and it was dry. The patient was now allowed to walk. On July 30th the leg was quite well. This was a bad case, which had already been under other treatment for six months. The constant rest was helpful, but the relief afforded by the action of the ichthyol on the dilated vessels was the direct means of cure.

CASE 4.—This patient was a married woman, 60 years of age, who had for years suffered from recurrent attacks of eczema. Any nervous excitement or worry brought on an attack. Both knees and wrists were scaly, red, and itchy, whilst the lower part of the abdomen and vulva and the upper part of the thigh were red and painful and exuded a copious serous discharge. The treatment was commenced on Oct. 30th, 1899. The abdomen being very painful I applied at first simply a dusting powder of starch and bismuth with a little boric acid. On Nov. 9th I prescribed 15 grains of ichthalbin thrice daily in cachets. On the 17th there were much less pain and exudation. I now ventured to apply 3 per cent ichthyol lanoline salve which answered admirably; the itching was relieved and the skin soon resumed a normal appearance. On the legs and arms the following ointment was used twice daily: ichthyol, one drachm; ammoniated mercury, 10 grains; oxide of zinc, two drachms; resorcin, 10 grains; vaseline, six drachms; and lanoline to make up two ounces. An improvement was manifest from the first, and recovery followed in six weeks.

In the acute cases no washing with soap was allowed, but with warm oatmeal water instead. When the parts were dry 10 per cent. ichthyol soap was used. No special diet was imposed. Ointments were not merely smeared over, but were gently rubbed in and the parts were covered with lint, linen, or silk, no cotton or flannel being allowed to touch the surface. In cases of eczema of the face I have also used with benefit zinc-ichthyol salve muslin, but it is rather difficult to keep applied.

ACNE.

Ichthyol is particularly beneficial in this disease, both in acne vulgaris and acne rosacea. In the former strong external applications can be borne, but in the latter much weaker strengths must be used. The best results are obtained when external and internal treatment are combined, and in some cases of acne rosacea in which the skin is too thin and irritable to bear even weak solutions the internal administration of ichthyol alone with steaming will suffice to effect a cure. My general plan of treatment is to begin with five grains of ichthyol thrice daily after food, increasing to 10 grains. Every night and morning the face is steamed for 15 minutes and then washed with ichthyol soap made into a lather and allowed to dry on, which is then gently washed off with water. After each washing, if it can be borne, ichthyol salve (often combined with ammoniated mercury) is applied. In acne vulgaris, after steaming strong sulphur and ichthyol soap is used, with brisk rubbing by means of a flesh-glove. The diet is regulated. Ichthyol itself relieves mild cases of constipation, but if it does not I give a compound pill of iridin and euonymin or podophyllin.

CASE 1.—This patient, a married woman, 46 years of age, had been treated for acne rosacea for six years. When she was first seen by me in February, 1897, her face was red all over and the smaller blood-vessels were very prominent. The nose, the brow, and the chin were covered with inflamed sebaceous glands, partly papular, others pustular. Her face was painful and she could not go out without a veil. She was placed on five grains of ichthyol thrice daily, and the following ointment was applied twice daily: ichthyol, 25 grains; ammoniated mercury, five grains; and vaseline and lanoline, of each half an ounce. Improvement was perceptible from the first and in a fortnight it was distinct. The amount of ichthyol was now doubled and extract of nux vomica was given before meals. In another month there were scarcely any inflamed glands and the redness was confined to a few dilated vessels on the cheeks. Two months later there were no traces of acne and the patient has remained free from it ever since. This case had resisted all remedies for six years; improvement commenced immediately that ichthyol was given, and to ichthyol I unhesitatingly give the credit of the cure. A similar condition existed in this patient's daughter, aged 24 years; it yielded to ichthyol in an equally satisfactory manner.

CASE 2.—This patient was a female, 17 years of age, who suffered from acne vulgaris. Her face was covered with inflamed sebaceous glands and "blackheads." Constipation was also complained of. Steaming, brisk rubbing with flesh-gloves, and the use of sulphur soap were prescribed. Internally saline purges were given. As this treatment did not do the good that I expected I ordered 10 per cent. ichthyol soap and the following ointment to be rubbed into the skin night and morning: ichthyol, 72 minims; resorcin, 10 grains; vaseline, two drachms; and lanoline to make up one ounce. Internally five grains of ichthyol were given thrice daily and on every second night a compound iridin pill. Improvement was gradual but sure and in three months the cure was complete.

OTHER APPLICATIONS OF ICHTHYOL.

I have also used ichthyol with success in many other diseases, such as endometritis, in which I have had some startling results. Although it does not come within the proper scope of this paper I should like to mention one case of endometritis which under the ordinary routine practice would have involved the scraping of the uterine mucous membrane, but which was cured by continued nightly applications of glycerine-ichthyol tampons in the proportion of two drachms of ichthyol to one ounce of glycerine. This patient had had two mucous polypi removed from the cervix without relieving the pain, and she was therefore very reluctant to undergo another operation. The ichthyol treatment was persisted in for five months, and ergot, nux vomica, and potassium chlorate were prescribed at the menstrual periods. The result has been highly satisfactory, as all pain and feeling of "bearing down" are gone and the patient feels quite well again. I had a similar case in an unmarried woman with equally good results.

Recently I have used strong solutions of ichthyol to paint over sprains. The swelling was quickly reduced in the few cases in which I have tried it.

CONCLUSIONS.

My experience has been that from 2 per cent. to 5 per cent. ichthyol applications are best in acute forms of inflamed skins and from 5 per cent. to 10 per cent strengths in more chronic, drier conditions. In acne vulgaris anything up to 25 per cent.—namely, between 10 per cent. and 25 per cent.—is useful. In all cases the internal administration of the drug is an assistance. I believe that ichthyol taken internally has a direct influence on the skin and is most probably excreted by it. Moreover, the taking of ichthyol internally increases weight, and this applies more particularly to weakly, strumous children.

The one disappointment which I must record is that itching is not relieved as quickly as one might expect, certainly not as quickly as the pain is relieved. Patients express gratitude for the feeling of comfort experienced, but the itching soon returns. The itchiness does indeed disappear after a time, but it is always the last symptom to go.

In prurigo and pruritus vulvæ or ani I have not found much benefit to result from the use of ichthyol, particularly in those cases where there is no known organic cause such as diabetes, ulcus cervicis, or anal fissure. I have tried ichthyol in 11 such cases and in only one have I had satisfactory results. This patient was a pregnant woman with pruritus vulvæ.

When prescribing ointments I always advise the patients to use their oldest under-linen as ichthyol has a staining effect, although it is stated that if quickly washed in warm water any clothing thus stained is made quite clean again.

Ichthyol, of course, is not applicable to every case of eczema or acne, neither do I claim for it a specific action, but it is undoubtedly a useful drug in these diseases.

Redcar.

FOURTEEN AND A HALF HOURS' ARTIFICIAL RESPIRATION IN A CHILD ONE WEEK OLD; RECOVERY.

BY GEORGE E. KEITH, M.B., C.M. EDIN.

TOWARDS the end of August I delivered a lady in the country of a healthy boy weighing six and a half pounds. The birth was premature, but only by three weeks. The child was well formed in every respect and, with the exception of a very long and tight foreskin, there was nothing to

remark about him. As there was evidently much difficulty in passing water, the urine taking a long time to come and the child screaming and kicking, circumcision was advised as early as possible. This was agreed to, but, owing to the mother having a very severe bilious attack on the day after the confinement and as her milk did not agree with the infant, the operation was postponed from day to day. On the morning of August 27th, one week after birth, the operation was performed. The child did not breathe well under the chloroform and he lost more blood than is usual. He slept for some hours afterwards and awoke in the afternoon looking quite natural. He was then put to the breast, but did not seem to care to take much nourishment. He was quiet until 9 P.M., when he became very wide awake and screamed for two hours. There was no trouble with the urine and he had passed plenty since the morning. At 11 P.M. he became quiet and on being put to the breast took a little milk, but he did not seem to care to take much. He was now very sick and brought up seemingly all the milk that he had taken. Immediately afterwards he went to sleep. Up to 3 A.M. the nurse had looked at him several times and each time she found him sleeping heavily. At 3.15 A.M. the mother asked the nurse if the infant had not better be roused and put to the breast, and on the nurse picking him up she noticed that his breathing was laboured and that his face was cyanosed. She at once brought him to my room and on seeing him I thought that he must have had a convulsion, but whatever had happened he looked alarmingly ill. I sent her back to the mother's room telling her to give the baby some weak brandy-and-water, and hurriedly putting on my clothes I went to the other room, where I found a still more serious state of things, as the breathing of the child stopped entirely a few seconds after I arrived. To all appearances the child was dead. On listening to the chest I found the heart still beating, so I at once commenced artificial respiration. Within two or three minutes I was able to desist as the natural breathing was resumed, and after watching the child for ten minutes I returned to my room. In a few minutes I was again sent for, again to see an apparently dead child. Artificial respiration was re-commenced, and after 20 minutes the natural breathing was established, but only to cease in a very few minutes. The heart was now very rapid and the colour was, if anything, worse, and though I began artificial respiration again it was more from a sense of duty than from any expectation of bringing the child to life. Very soon after commencing the artificial respiration for the third time the heart seemed as if it were going to fail as the beats dropped from about 200 to well under 100 to the minute, the exact number being impossible to count as I could only listen with my ear to the chest very hurriedly. I think this slowing of the heart's action was due to performing the forced respirations too seldom to the minute, as on moistening the lips with a good deal of strong brandy-and-water and increasing the number of respirations to about 25 to the minute the heart regained its rapidity. After this I never slowed down to less than 20 to the minute. Hour after hour this monotonous business went on and hour after hour I became more and more convinced that it was all wasted labour and that in spite of all my endeavours the child would ultimately die. The first gleam of hope came after it had seemed that all hope had gone, for by noon with every forced expiration and inspiration there came a most ominous creak, showing that the lungs were filling up with fluid and that if this went on increasing the end could not be far off. By 12.30 midday this sound had increased in the most alarming manner and more and more force was required to drive the air in and out of the lungs. The heart was again beginning to show signs that it was being asked to do more work than it was able, the sounds becoming weak and the beats irregular. As early in the morning as possible I had wired to London for cylinders of oxygen to be sent down by passenger train and most fortunately the first arrived just at this time. A slight stream of oxygen was at once directed against the child's nose and mouth, the end of the tube being held a few inches away. Within 15 minutes there was a decided change for the better; the colour of the face lost its earthy look, the moist sounds noticed with the forced respirations gradually died away, and the heart sounds increased in strength and regularity, but still there was no attempt at natural breathing. During all those hours I kept the child warm, as well as possible, by laying him on a blanket over a rubber hot-water bottle which was changed frequently and by covering the chest with a blanket, at least as much as was possible. For nourishment it was only possible to moisten the lips with brandy-and-milk, as there was no attempt made to swallow and I was afraid of fluid going into the air-passages if put into the mouth in larger quantities. There was no further improvement until 3.30 P.M., more than 12 hours after the commencement of the illness, when a very feeble attempt at inspiration was noticed. This happened at first every minute, but the intervals got shorter and shorter until at 4.30 P.M. the child was inspiring entirely. Still there had been no attempt made at expiration, but the difference which the last hour had made was so marked that I began to hope that there was a slight chance of saving the child's life. The normal expiration began to return about 5 P.M., and in exactly the same manner as the inspiration, and at 5.45 P.M. I was able to cease all artificial means of inflating the lungs—exactly 14½ hours from the onset of the symptoms. By now the condition of the child was pitiable. The chest and the upper part of the abdomen resembled raw beef, though the skin was not broken, the arms were red, excoriated, and marked all over with angry lines from the violent use to which they had been put. He was quite unconscious, there was no pulse at the wrist, the heart beats were very rapid, and the breathing was of the most shallow description. The skin covering the anterior fontanelle was depressed and every now and again there was a peculiar contraction of the muscles of the lower jaw. From the commencement of the illness the pupils had been contracted, but not very markedly so, and this condition continued for some days. In the afternoon, as I was getting exhausted from the prolonged manipulation required for the artificial respiration, and not knowing how long it would be necessary to continue it, I wired for assistance from town, and though this arrived too late to relieve me of the manipulation there was plenty of work to do in watching the child. After such a terrible experience I felt that a medical man must be in constant attendance on the child day and night. About 10 P.M. the child became very cold and I had him wrapped up in cotton-wool. The oxygen was kept constantly playing on his face until midnight, when it was stopped for an hour and a half, but it had to be begun again as the child became very cyanosed, and as immediate benefit was at once noticed the administration did not again cease for many hours. After the normal breathing commenced again he was fed by a spoon with brandy-and-water and milk-and-water alternately, 20 drops of the former being given at a time, but as there was much difficulty in getting him to take the milk-and-water and none in taking the brandy-and-water, the latter was alone given for the next 15 hours; it was given every hour. The breathing was so shallow all through the night that the closest attention was required to say whether the child was breathing or not. At 3 A.M. the temperature was 103·6° F. This was the first time that it had been taken. One grain of antitoxin was given and this brought the temperature down two degrees in a couple of hours. About this time the child appeared to become conscious as he gave a few feeble little cries, the first sound he had made for many hours. The bowels were moved early on the morning of August 30th, and as the motions were most offensive and unhealthy one grain of grey powder was given. The child remained much in this state all day. I had him put to the breast in the afternoon, but he could not get a proper hold of the nipple so we had to continue feeding him with the brandy-and-water. The temperature did not rise above 102° all day and the heart beats gradually slowed down to 170, and it was now possible to feel that there was a pulse at the wrist, though it was not strong enough to count the beats. The oxygen was still being continuously used. As night came on the child did not seem so well; his face became pinched and white, the pulse could no longer be felt at the wrist, the heart beats increased in rate and decreased in strength, there was marked Cheyne-Stokes breathing, and the temperature rose in a most alarming manner. At 1 A.M. on August 31st the temperature had reached 105°. The child was sponged with tepid water and one grain of antitoxin was given. This quickly brought the temperature down, until at 4 A.M. it was 103·8°, when another grain of antitoxin was administered. This had the desired effect, and by 6 A.M. the temperature had fallen to 101° and it never again rose above that point. Thinking that the oxygen might be helping to keep the temperature up its continuous administration was stopped and it was only given when it was thought necessary, judged of either by the colour or the breathing. By 9 A.M. the

child was much better. The pulse was quite regular and countable at the wrist, the colour was better, and the breathing, although still shallow, had quite lost its irregular nature. He seemed out of danger, but after the fright that he had given us I still considered it necessary to have him watched continuously by a medical man. He was now screaming incessantly and he seemed to have much colic. The motions remained very offensive, so he was given 10 drops of fluid magnesia every two hours. As he still did not seem to take the breast properly all idea of bringing him up in that manner was abandoned and it was arranged for the Walker-Gordon Company to send down a supply of their milk every day. After a restless morning he became quiet about 2 P.M. and dropped into a sleep. Soon after the breathing became more and more shallow and the face again became cyanosed, but on allowing the inhalation of oxygen for a few minutes the respirations quickly improved. This happened three or four times during the afternoon, but beyond giving oxygen nothing more seemed necessary until 4.30 P.M., when suddenly, without the slightest warning, and after one or two catches in his breathing the respirations stopped entirely. I immediately began artificial respiration and turned on the oxygen. Fortunately this attack only lasted a few minutes. After this, beyond the most constant care and watchfulness, there was no further anxiety, and the little patient is now an ordinary baby of the age of three months. Indeed, it would be impossible to tell from his looks and his general condition what an alarming and dangerous illness he has been through. The manipulation does not seem to have injured him in any way. It was simply marvellous to see how quickly the marks resulting from the prolonged movements disappeared from his chest, abdomen, and arms.

It is not possible for me to come to any definite conclusion as to the reason why the breathing ceased for so long, nor have any of my friends been able to give me a reasonable explanation. Probably it was caused by a combination of the chloroform, the shock, the hæmorrhage, and the disordered stomach, but what part each played in the pathological condition it is difficult to determine.

There were several astonishing features about the case. The amount of brandy which the child required was, for his age, enormous. A smaller amount than 20 drops every hour was tried and the same quantity at longer intervals, but the result under both conditions was the same—he at once seemed to lose ground. The brandy was never at any time thrown off by the lungs; at least it was never noticeable in the breath, so that it is probable that the child used it all up in the struggle which he made for his life. It is also wonderful that this small child, only a week old, was able to stand the manipulation. He was not spared in any way; the urgent thing was to get him to breathe and no thought was given as to how he would be affected if he recovered his breathing powers. It may seem strange that I could keep up artificial respiration for over 14 hours with only occasional breaks, when my nurse did it; but after a time the action became entirely mechanical, and though I was thankful to stop I was not so exhausted as might have been expected. It may be added that the nurse has worked for me for some years and that she was of the greatest possible assistance.

Charles-street, W.

CLINICAL NOTES ON THE RESULTS OF A PURE PROTEID FOOD IN FIFTY-FIVE CASES (VARIOUS DISEASES).

BY R. E. WILLIAMSON, M.B., C.M. EDIN.

AMONG the many foods on the market at the present time there is some difficulty for the busy general practitioner to make a selection of one useful for all-round purposes as an adjunct to ordinary dietaries in sickness and one at the same time within reach of all classes. There are many that have valuable qualities but there are few that do not possess some material drawback—e.g., some disagreeable taste or difficulty of preparation—or that the price does not make them prohibitive to one's poor brethren, so that when such a one is found, which on extended trial seems to answer and maintain its position, I feel it is sufficient apology for giving one's experience. Exact scientific experiment in semi-country practice is impossible, and these notes only pretend to be those of ordinary clinical observation.

I have used plasmon now in 55 cases in my own practice, and my friend and neighbour Mr. H. Hebblethwaite has used it in six cases, four of them of typhoid fever, one of severe anæmia, and one of obstinate and persistent vomiting, and he says that he has never had such a satisfactory diet for patients suffering from typhoid fever and that they did splendidly on it, that the recovery of the anæmic patient was most rapid, and also that in the patient suffering from vomiting it was the first food tolerated.

The cases in my own practice are as follows:—(1) acute gastritis, five cases, in one of which, complicated with cirrhosis of the liver, the patient had very severe hæmatemesis; (2) chronic gastro-intestinal catarrh, 12 cases, three of these patients after somewhat acute paroxysms had catarrhal jaundice; (3) gastric neurasthenia, five cases; (4) anæmia, nine cases; (5) erysipelas, one case; (6) phlebitis, one case; (7) puerperal septicæmia, one case; (8) influenza, five cases; (9) pleurisy, two cases; (10) operation for removal of tonsils and adenoids, four cases; (11) tuberculous diarrhœa, three cases; (12) acute diarrhœa (from errors of diet), three cases; (13) carcinoma of liver, one case; (14) diphtheria, one case; and (15) cardiac disease with gastric complications, two cases. I am not going to give a description of each case, but shall pick out cases which I think may serve as types of the efficiency of plasmon, and I may premise that it seems to be of the greatest use in diseases of the alimentary canal, acute febrile conditions (e.g., influenza, pleurisy, septicæmia, &c.), tuberculous and wasting diseases, and in one case I saw distinct temporary benefit in a case of carcinoma of the liver and a great relief of the painful gastric symptoms.

The first case in which I used plasmon was that of my wife who had been ill for three weeks, suffering from an attack of influenza complicated with gastro-duodenal catarrh and exhibiting some symptoms of a typhoid nature; she had a persistent rise of temperature, varying from 100° to 101° F. in the morning, rising usually in the afternoon to from 103° to 104°, and subsiding in the evening to about the morning temperature. She was most carefully dieted; peptonised milk and other peptonised foods, various special foods, and other preparations in turn were tried, but nothing seemed to agree—all caused nausea, flatulence, and general distress; and when a friend wrote to me and asked if I had tried plasmon, stating that he had derived much benefit from it personally, although I was thankful for the suggestion I fear that I was very sceptical as to the result. I gave it first dissolved in water and added to a little thin barley-water and only in small quantities, two or three teaspoonfuls at a time; this seemed to agree perfectly and so I increased the quantity. I then gave it in chicken-broth, then in milk, gradually increasing the amounts, all of which proved satisfactory. *Post hoc* or *propter hoc* the change was almost magical. The gastric symptoms subsided, the temperature gradually fell, and convalescence was rapid, and faith in the remedy is now so unbounded that she always keeps it in the house and if there are any symptoms of stomachic derangement she promptly goes back to it.

The next case I tried it in was that of sub-acute chronic gastric catarrh in an old gentleman, age 75 years, suffering from cardiac dropsy and with whom the taking of even the lightest forms of food caused distressing heart storms, usually only relieved by vomiting; he was put upon the plasmon on Dec. 10th, 1899, and it was given in a similar manner to that employed in the former case. There was a speedy abatement of the gastric trouble, a temporary attempt at cardiac compensation, and considerable lessening of the dropsy, but this was only transient, and the patient died on Jan. 6th, 1900, from gradual cardiac failure, but without any further return of his gastric trouble.

Of the acute cases of gastritis, all of which were alcoholic, I will mention one only—that of a female, aged 34 years. I had attended her frequently for similar attacks and she had also a cirrhosed liver. On April 2nd I was called up early as the patient was vomiting large quantities of blood; this continued for some hours at intervals. For the next two days she was fed per rectum, then plasmon dissolved in water and sweetened with saccharin was given in small doses, and as it agreed with her a similar course was pursued to that described in the former cases, and in spite of the tremendous loss of blood which had occurred her convalescence was more rapid than on any previous occasion, and up to the

present time she has better health than she has had for the last two years.

In anæmia I have been greatly struck by the action of plasmon. Two of the cases were very severe in character, extreme breathlessness on the slightest exertion, palpitation, tinnitus, and a syncopic tendency being present. The rapidity of the improvement in these cases under rest, iron, and plasmon dissolved in milk (one drachm in half a pint of milk three or four times a day) was simply marvellous when compared with other cases similarly treated, but without the plasmon.

The case of puerperal septicæmia was that of a woman who was confined of her second child on June 18th, 1900. On July 1st she had a rigor; her temperature rose to 104·5° F. during the next few days, and she had several rigors more or less severe. On the 6th she had a very severe rigor and was violently sick; her temperature at 10 A.M. was 105·2°. She was put upon plasmon which agreed perfectly with her, and in the afternoon she seemed greatly better and the temperature had fallen to 103°. On the next morning it was 99·4°; on the following day it was normal and her convalescence was uninterrupted. The probable cause of the septicæmia in this case was a block in a faulty drain and insanitary conditions arising therefrom, which had in the meantime been rectified.

A woman, aged 32 years, started with severe erysipelas of the head, the neck, and the chest on July 3rd, 1900. This was followed by a large abscess formation over the right infraclavicular region which extended half way down the sternum, which was opened and drained on the 15th. After this the temperature fell and the appetite improved. On the 18th she was very sick and complained that all things disagreed with her and the temperature rose again. On that day she was put on plasmon, which at once seemed to suit her, and there were no further drawbacks.

In the cases of tuberculous diarrhœa, all of which were unfortunately in an advanced stage, plasmon most distinctly gave great relief; the diarrhœa was greatly lessened, the temperature was kept much lower, and the abdominal pain and distension were relieved. That life was considerably prolonged those who saw the cases were convinced, and they could not help thinking that had it been used in the early stages the prognosis of the cases might have been hopeful.

In the cases of acute diarrhœa plasmon answered well. One of them was an old lady, aged 92 years, suffering from bronchitis at the time and whose case seemed hopeless. She was kept for several weeks upon it and is now as well as she has been for the last three years, getting up daily in her bedroom.

It seems particularly good in neurasthenic cases and builds up the nervous system. Two of the cases of gastric neurasthenia had been for years under treatment, one under my care for four years and the other for two years and prior to that constantly under the care of other medical men, and for some months now the patients have been off my list and have had no medicine at all.

Personally I have used plasmon considerably, chiefly in the form of the chocolate and the biscuits, which I carried the whole of last winter on hunting days, as did several hunting friends, also on long days' shooting on the moors in Scotland and fishing in Yorkshire; and I have always found that I could stand the longest day with less fatigue for the moment and less feeling of exhaustion afterwards than formerly. One hunting friend, who has also a pack of beagles which he hunts himself on foot, told me that he always carries the chocolate now and that constant consignments of the chocolate have been sent out to three of his brothers who are at present serving in South Africa.

When at Aldershot this Whitsuntide I thought it would be a good opportunity of trying its sustaining properties and I had some sent down for the officers' mess. On the unfortunate Monday which will always be remembered at Aldershot as "Black Monday" all our officers, 23 in number, carried three sticks of plasmon chocolate; none of us suffered the slightest either from the heat or from the fatigue, and although we had breakfast at 5.30 A.M. and did not mess until 8 P.M., one of the senior captains told me that, with the exception of the chocolate and a drink of lime-juice and soda, he had absolutely nothing between times, that he felt quite fresh, and had no feeling of exhaustion.

So far I have not found a single patient object to it and being practically tasteless it can be added to other foods without destroying their natural flavour, thus allowing it to be given without detection—a property of material advantage when one has to deal with faddy patients.

What has struck me most in using plasmon is the ease with which it is digested and the variety of media in which it can be used; preferably in my own practice I use milk, animal broths, or barley-water. The majority of patients like it and express a feeling of comfort and well-being after taking it, and their rapid gain of weight is most marked. One of our nurses at the workhouse who was run down and anæmic, taking nothing in addition to her ordinary diet but a full teaspoonful of plasmon dissolved in half a pint of milk twice daily, gained three pounds in weight in a fortnight.

Since compiling these notes I have seen Captain —, who has returned from South Africa, one of the three brothers previously alluded to; his statement as to the use of plasmon chocolate I give in his own words: "It was splendid stuff—quite the best thing we had out there. I sent home for some more."

Otley, Yorks.

ESTIMATION OF IRON IN ANIMAL ORGANS.

BY PERCY A. E. RICHARDS, F.I.C.,

ASSISTANT LECTURER ON CHEMISTRY AND PHYSICS, CHARING-CROSS HOSPITAL MEDICAL SCHOOL, AND PUBLIC ANALYST TO THE PARISH OF ST. MARTIN-IN-THE-FIELDS.

THE amount of iron in human viscera is often a matter of considerable importance to the pathologist, but although that metal can be easily and accurately estimated, when present in any distinct quantity, by ordinary gravimetric methods, yet in the particular cases under consideration such a process frequently fails to give concordant results. This is due primarily to the small proportion of iron usually found in animal organs and also indirectly to the insoluble phosphates that are invariably present. A gravimetric method necessitates careful elimination of these during the process of estimation and it also entails the employment of a large amount of the organ for each operation. With a view to meeting these objections as far as possible the following process has been devised and has given most satisfactory results in practice.

From 50 grammes to 100 grammes of the moist organ are weighed in a platinum dish and heated over a Bünsen burner until all moisture is driven off, the organic matter is burnt, and only a black, charred mass remains. This is carefully moistened throughout with strong nitric acid, avoiding a large excess, and is then incinerated gently to prevent loss during deflagration. The great bulk of the carbon may thus be removed, the mass being treated a second time with acid if required and again incinerated thoroughly. It is, perhaps, hardly necessary to point out that the nitric acid should be previously tested to ensure its freedom from iron. The metal is now left behind with the other mineral matter and a small amount of carbon. This is treated with pure hydrochloric acid, is allowed to stand for five minutes, and is then warmed and transferred to a beaker. The basin is washed out with warm hydrochloric acid, the washings are added to the bulk, and the whole is boiled after the addition of a few drops of strong nitric acid. This ensures thorough oxidation, and neglect of this precaution involves possible inaccuracy due to the presence of ferrous, with the bulk of ferric, iron. The solution after boiling is diluted with an equal volume of water and is filtered, the residue is washed with hot water, and the filtrate is made up to 50 or 100 cubic centimetres. This forms the stock solution and from it a measured portion (from one to 20 cubic centimetres, according to the strength of the solution) is taken with the pipette and is transferred to a Nessler glass. To this is added one cubic centimetre of a freshly-prepared solution of potassium ferrocyanide (1 per cent.) and the mixture is at once made up to 50 cubic centimetres. If precipitation occurs or if the colour is too intense the portion should be rejected and a smaller quantity of the stock solution taken. The colour so obtained is matched against that given by a known quantity of a standard iron solution and the weight of the metal is thence found by calculation. A suitable iron standard is one containing 0·1 gramme of metal per litre, each cubic centimetre being then equivalent to 0·0001 Fe. Such a standard is

best prepared by accurately weighing out 0·1 gramme of the purest "flower" wire, dissolving this in the minimum amount of hydrochloric acid, oxidising the hot solution with nitric acid, added drop by drop, boiling off the excess of the latter, and finally making up with distilled water to one litre.

If desired the estimation as detailed above may be repeated, using sulphocyanide of potash in place of ferrocyanide, the red ferric sulphocyanide being formed in place of the blue ferric ferrocyanide. In this case greater care must be taken to prevent the presence of much nitric acid, which itself gives a red colour with the sulphocyanide and would hopelessly vitiate the results.

Another matter of considerable practical importance is the accurate estimation of the moisture, as the results obtained above should be expressed in terms of dry viscera. Any attempt at removing the whole of the moisture from the weight necessary for the iron determination is both tedious and imperfect. It is therefore best to cut off a small piece of the organ at the time that a larger amount is taken, to place this in a separate dish, to divide it into small, thin slices with a sharp knife, to weigh, and to dry thoroughly in a water oven, and weigh again. The percentage of moisture can thus be accurately found.

The organs chiefly examined consisted of the liver, the kidney, and the spleen, and with all these the process has given good and concordant results.

Chemical Laboratory, Charing-cross Hospital.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum allorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MILLER HOSPITAL, GREENWICH.

A CASE OF PERFORATING GASTRIC ULCER.

(Under the care of the late Mr. T. MOORE.)

THE fact that there was a thick layer of lymph on the surface of the stomach, together with the escape of much gas on opening the peritoneal cavity, prove fairly conclusively that in this case a perforation must have occurred, though it is probable that very little extravasation took place, and that the opening was rapidly closed by effused lymph. For the notes of the case we are indebted to Mr. R. S. C. Edleston, late house surgeon.

A woman, aged 22 years, a general servant, was admitted into the Miller Hospital at 10 P.M. on Oct. 19th, 1899, with symptoms of perforation of gastric ulcer. Six months previously the patient was treated by Dr. W. Groome for anæmia and apparently completely recovered and returned to work. She admitted having been rather breathless on exertion, but she had never suffered from pain after taking food or at any time until the evening of Oct. 18th, when she was suddenly seized with violent pain in the abdomen. The pain continued throughout the night and she vomited once. On the following morning the pain had abated and she took an egg and bread-and-butter for breakfast, after which the pain almost immediately returned and was very severe, and she again vomited. Dr. Groome was called in and the patient was ordered to have milk and soda-water only and she did not vomit again until shortly before her removal to the hospital, to which she was conveyed on an ambulance.

On admission the patient appeared to be in great agony. The pulse was 146, the respirations were 52, and the temperature was 103° F. The face was pale and the expression was anxious. The eyes were widely open and staring. The lips and the tongue were dry. She was retching continuously, but did not vomit. The abdomen was greatly distended and tympanitic, it was tender all over, but especially in the region of the ensiform cartilage. Mr. Moore, who saw the patient at 11 P.M., concurred in the diagnosis of perforated gastric ulcer and it was decided to open the abdomen without delay.

An incision was made under chloroform from the ensiform cartilage to the umbilicus. On opening the abdominal cavity (which was reached with considerable difficulty owing to the distension and matting together of the tissues) gas escaped freely. A layer of organised lymph having been turned up the anterior surface of the stomach was exposed, and just below the lesser curvature midway between the cardiac and pyloric ends three elevated and dusky spots were seen lying close together, and each of about the size of a sixpenny-piece; the layer of lymph immediately covering them was almost as thick as the palm of the hand. There was no evidence of perforation, the peritoneal fluid, though plentiful, being quite clear. The stomach was firmly fixed by adhesions and consequently its under surface could not be examined. The abdominal cavity was thoroughly washed out with a weak solution of boric acid in boiled water and the layer of lymph was carefully replaced over the affected area. Owing to the peritoneal adhesions the whole length of the peritoneal wound could not be accurately united by continuous suture and several fine interrupted silk sutures had to be put in. The abdominal wall was united by stout salmon-gut sutures, no drainage-tube being used. The patient made an effort to vomit at the completion of the suturing of the abdominal wound.

On Oct. 20th no vomiting had occurred since the operation. The pulse was 98, the temperature was 101°, and the respirations were 34. One pint of water was given by the rectum; only teaspoonfuls of water were given by the mouth. On the 22nd four-ounce pancreatised nutrient enemata were given every four hours, and the rectum was washed out with one pint of warm water containing 20 grains of sodium bicarbonate half an hour before each nutrient enema. On the 23rd the patient complained of severe thirst, and milk and water, half an ounce of each, were given every three hours. On the 24th the milk and water were increased to two ounces every three hours. Nutrient enemata were given as before. The patient slept well and suffered no discomfort, but as the temperature was oscillating, though it was never high, the wound was dressed, and there was a slight purulent discharge from the suture wounds at the upper and lower end of the wound; the lowest suture was removed. On the 25th the diet was altered, two ounces of mutton-broth being given alternately with two ounces of milk and water every three hours. On the 28th the wound was dressed and a large quantity of purulent discharge occurred from both points above mentioned. The lower part of the wound was freely opened and a drainage-tube was put in, the wound being gently syringed out with boric lotion. On the 30th the wound was dressed twice daily. On Nov. 1st there was less discharge and the upper part of the wound was healed. The diet consisted of three ounces each of beef-tea or mutton-broth alternately with three ounces of milk and one ounce of lime-water. The enemata were discontinued. On the 5th the wound was firmly healed except where the tube was put in. The food was the same as on Nov. 1st, but was increased to six ounces at a time. On the 8th one drachm of virol was given three times a day after food. The food was the same as above but was increased to eight ounces every three hours. On the 11th two eggs daily were added to the diet, one with the milk and one as a custard pudding. On the 13th only a small button-hole was left where the drainage-tube had been removed. The virol was increased to two drachms three times a day. The patient was putting on flesh and was gaining colour. On the 20th a small granulation which had taken the place of the button-hole at the lower part of the wound was touched with silver nitrate. On Dec. 1st the wound was firmly healed. The virol was suspended. On the 5th the virol was again given as the patient did not seem to get on so well without it. On the 17th the patient was taking three drachms of virol three times a day and was putting on flesh and looked much better. She was given pounded fish and chicken. On the 19th she sat up for half an hour in the evening. On the 25th she was sitting up half the day. On the 28th she got up all day and walked about the ward. On Jan. 2nd, 1900, she left the hospital for a convalescent home, taking a supply of virol with her and was now taking half an ounce three times a day after food. On the 26th she returned from the convalescent home strong and healthy. Virol suited this patient and she digested it well.

CASHEL UNION HOSPITAL.

A CASE OF TRAUMATIC RUPTURE OF THE GALL-BLADDER; PERITONITIS; LAPAROTOMY; RECOVERY.

(Under the care of Mr. T. LAFFAN.)

FROM *a priori* considerations it might have been expected that the presence of bile in the cavity of the peritoneum would have resulted in a severe inflammation of that membrane, but experience shows that healthy bile may be extravasated for days or even for weeks in the peritoneal cavity without exciting any great degree of peritonitis. Thiersch removed[1] over 40 pints of bile from the abdominal cavity and the patient recovered. It is essential, however, that the bile must be aseptic, therefore the history of survival for many days after rupture of one or other part of the biliary tract can only have occurred in cases where the rupture has resulted from traumatism, for in most of these the bile will have been normal. In cases where the rupture has followed the presence of a gall-stone, or an ulcer, or some other pathological condition, the bile is nearly always infected with micro-organisms, and in such cases peritonitis rapidly follows. That healthy bile when extravasated can be absorbed to some extent has been proved by the experiments of Schuppel and Bosbrom, but this power of absorption is probably only limited, and sooner or later peritonitis results which ultimately proves fatal. A specimen in the museum of St. Bartholomew's Hospital shows a rupture of the gall-bladder from traumatism in which death resulted from peritonitis five weeks after the bile was first extravasated. Since these cases of traumatic rupture of the gall-bladder or bile-duct survive several days or even longer it is obvious that surgical interference would be likely to be followed by success. The first recorded case of operation for rupture of a bile-duct was under the care of Mr. W. H. Battle[2]; the operation was performed on the eighth day, but the boy died on the following day. A very similar case under the care of Mr. W. G. Spencer[3] was reported in which death resulted on the thirty-third day.

A married woman, aged 50 years, was trodden on by a cow while in the act of milking it. She felt something give way inside, and after suffering for some time from all the symptoms of acute inflammation was admitted to Cashel Union Hospital on Sept. 15th, 1898.

On admission the patient was in an alarming state, being almost moribund. She was deeply jaundiced and all the symptoms of peritonitis were present. The effusion was, however, circumscribed, presenting the appearance of a considerable tumour in the epigastric and adjacent regions. The patient was put under chloroform and with the assistance of Dr. T. O'Connell, Dr. G. Cook, and others laparotomy was performed. A large quantity of bile, pus, and some liquid fæcal matter were evacuated. The cavity was washed out with antiseptic solution, a drainage-tube was inserted, and the wound was sutured, with the exception of the opening for the tube. The patient was so weak and the parts being so matted as to require a regular dissection to unravel the point of rupture, it was deemed more prudent to make it an operation *de deux temps* if necessary. The necessity for a second operation, however, did not arise, as after an uneventful period the wound entirely closed, all discharge ceased, and the patient made a perfect recovery.

Remarks by Mr. LAFFAN.—I have seen an account of a case lately in one of the journals where a like closure followed a like treatment. The precise seat of the rupture must here remain undetermined, but from the great predominance of pure bile and the presence of a mere tincture of fæcal matter rupture of the biliary passages may be assumed.

KASHMIR MISSION HOSPITAL.

SIX CASES ILLUSTRATING THE OPERATIVE TREATMENT OF SOME FORMS OF HIP-JOINT DISEASE.

(Under the care of Dr. ERNEST F. NEVE.)

IN the early history of the operative treatment of disease of the hip-joint the only procedure adopted was incision of a presenting abscess, and recovery occurred in a small proportion of the cases, though many died from hectic fever and exhaustion after prolonged suppuration. The introduction of excision led to more rapid healing and was a great advance in so far as it demonstrated that it was possible to remove all the diseased tissue from the joint; but in many cases excision leaves a limb which is of no value to the patient, for it is not rarely quite incapable of sustaining any portion of the weight of the body. The present diminution in the frequency of excision is to be partly credited to this, and in part to the fact that prolonged rest with or without less drastic operative treatment in a large proportion of cases suffices to bring about recovery with a useful limb. Mr. Neve's cases recorded below demonstrate clearly the valuable results of early judicious treatment of disease of the hip.

CASE 1.—A child, aged eight years, was admitted into the Kashmir Mission Hospital on May 4th, 1896, suffering from hip-joint disease with dislocation backwards of the head of the femur. The joint was opened by a posterior incision three and a half inches long and some ounces of thin pus were evacuated. The acetabulum was filled by a globular mass of tuberculous synovial membrane of the size of a walnut. After this had been removed the joint was cleansed with the irrigation gouge and hot flushing, the dislocation was reduced, the cavity was dried, iodoform was introduced, and the wound was completely closed. On the 16th the wound was soundly healed. On June 8th the patient was dismissed with instructions to continue rest. The limb was in good position and the joint was moveable without pain.

Even where there is caries satisfactory results may be obtained by similar treatment.

CASE 2.—A boy, aged 14 years, was admitted into the Kashmir Mission Hospital with much tenderness and thickening of the hip, which was flexed and rigid. On July 23rd, 1896, Mr. Arthur Neve opened the joint by an anterior incision. The head of the bone had disappeared by absorption. The remaining carious surface having been gouged and the joint cavity having been cleansed and dried iodoform was inserted and the wound was closed. Union occurred by first intention. The limb was one and a half inches shorter than the other. The patient was discharged on August 20th.

Where, as sometimes happens, a sequestrum is lying loose in the joint its removal by operation is especially indicated.

CASE 3.—A little girl, aged six years, was admitted into the Kashmir Mission Hospital on April 28th, 1896, suffering from great pain in the hip. All the classical signs of disease of the joint were present and there was marked swelling behind the great trochanter with fluctuation. By a posterior incision about eight ounces of sero-purulent fluid were evacuated and a sequestrum was found consisting of the entire head of the femur. After the carious inner aspect of the neck had been dealt with by means of gouge forceps and the joint had been thoroughly cleansed and dried iodoform was inserted and the wound was completely closed. This healed by first intention. Progress was uninterrupted and on May 15th the patient was allowed to go home.

Such cases demonstrate the great advantage of closing the wound and obtaining primary union. The real advance consists chiefly in earlier interference, more thorough removal of disused tissue, and the abolition of the drainage-tube. The last is a mechanical irritant and is only too apt to favour the occurrence of sepsis, especially in little children in whom antiseptic dressings of the hip are exposed to great risk of contamination. If this be avoided, then excellent results may be obtained even with drainage.

CASE 4.—A girl, aged five years, was admitted into the Kashmir Mission Hospital on April 21st, 1891, with a large abscess of the hip resulting from disease of the upper third of the femur, affecting the joint apparently through the epiphysis. The abscess was opened and its cavity was cleansed. A drainage-tube was inserted. This was removed on the twelfth day. Nine days later the wound was healed. The limb was straight and there was no shortening.

Occasionally one fails to secure primary union. This may be due to re-formation of fluid in the joint, as illustrated by the following case.

CASE 5.—A boy, aged five years, was admitted into the Kashmir Mission Hospital with severe pain. There were flexion and adduction and also thickening around the hip. On July 23rd, 1896, the joint was opened from the front. The acetabulum was partly obliterated by cicatricial tissue. The head of the femur, which was carious, was gouged, and after the joint cavity had been irrigated and cleansed it was dried and closed as usual. It was thought that the incision

[1] Mayo Robson: The Diseases of the Gall-Bladder and Bile-Ducts, p. 55.
[2] THE LANCET, April 7th, 1894, p. 864.
[3] THE LANCET, Jan. 8th, 1898, p. 100.

had healed by first intention, but on August 5th a little clear serous discharge came away. This recurred at intervals until Sept. 9th when the patient was allowed to go home. There was still well-marked thickening round the joint and the limb was flexed and rotated inwards. This case ran much the same course as if treatment by drainage had been intentionally employed.

Where, however, the wound becomes septic healing is apt to be greatly delayed. This is illustrated by the following case.

CASE 6.—A girl, aged three years, was admitted into the Kashmir Mission Hospital on June 16th, 1891, with well-marked hip-joint disease associated with great pain. The joint was opened by a posterior incision, some thin pus was evacuated, and a sequestrum of the size of a filbert was found consisting of part of the head of the femur. The joint was cleansed, iodoform glycerine emulsion was injected, and the wound was closed. On the 21st the joint appeared to be swollen and on the removal of stitches there was a discharge of pus. This continued until Sept. 16th, gradually diminishing in amount. The progress of this case stands in marked contrast to that of Case 3, in which the pathological condition was almost identical.

Remarks by Dr. ERNEST NEVE.—That the tendency is strong for hip-joint disease to terminate in a natural cure is shown by the large number of cases which recover under favourable conditions of rest. Other cases, of a severer type, call for operative interference. Much confusion has been caused by statistical comparisons of the results of these two methods of treatment. The one class merges into the other, but typical cases are very different. Those lesions cured by rest alone include many early, subacute, mild, and otherwise favourable cases; while those treated by operation are apt to embrace cases of chronic, intractable, complicated, and progressively destructive disease which are also only too often associated with grave malposition. For it is in cases which, in spite of rest, are doing badly, that the surgeon is compelled to step in.

In the absence of treatment such cases usually go on from bad to worse. Sooner or later pent-up matter finds an outlet, sepsis ensues, and other evils follow in its train. Many patients come for the first time to the surgeon when this stage has been reached. I have notes of 10 cases, all of which had become septic when first seen; all had one or more sinuses and in most there were also extra-articular abscesses and the joint was more or less ankylosed in bad position. Five of these were treated by drainage alone and in five the head of the femur was also excised. Of those treated by drainage, one patient left the hospital after 48 days not improved, the discharge still being copious. The other four cases improved under treatment, but in three of them the hip, which was contracted on admission, remained so and it was deemed inadvisable to rectify this by excision or section of the neck of the femur. One of the patients was 60 years of age and the disease had been going on since childhood; another patient, aged 30 years, had a similar history. In the five cases in which excision was performed two of the patients left, not improved, after two months' treatment. One patient was healed in 44 days with a straight limb and very little shortening, one was healed in 67 days with the limb in good position, and one was dismissed on the fifty-fifth day improved but with still a little discharge.

The results obtained by late excision or drainage compare very unfavourably with those obtained by early exploration with arthrectomy, gouging, or sequestrotomy. This, the great modern advance in the treatment of hip-joint disease, we owe largely to Mr. A. E. J. Barker, who in 1888 showed that rapid healing could be obtained after aseptic exploration of the joint by a sufficiently ample anterior incision to enable, as far as may be, the products of disease to be evacuated with the aid of a gouge and irrigation. The great value of this method is that it reveals the exact nature of the disease, the condition of the synovial membrane and bones, and especially the presence of sequestra. It is more successful if performed early and before matter has escaped from the joint cavity and burrowed in the planes of fascia. Occasionally at this stage, if deemed necessary, a formal excision may be performed, but usually judicious gouging will prove much less severe and quite radical enough. The anterior incision, although preferable, is not essential, but asepsis is. Of course such operations must be followed by prolonged rest. In fact, after the wound is healed, the cases are treated like those more favourable ones which are cured by rest alone. The best results are obtained where the disease is synovial.

In progressive hip-joint disease, especially where tension and pain are on the increase, the case for early operation is very strong. Where asepsis is secured and the operative treatment is judicious and adequate, the immediate results may be ideal. The completion and permanence of the cure will, of course, depend upon the maintenance of rest for a sufficiently prolonged period, until, in fact, the tissues of the joint area are sufficiently consolidated to bear the weight and strain of the body without injury.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Pseudo-actinomycosis of the Liver.—Carcinoma commencing in Supernumerary Nipples.—Fibroma of the Tongue.—Acute Yellow Atrophy of the Liver.

A MEETING of this society was held on Nov. 20th, Mr. W. WATSON CHEYNE, the President, being in the chair.

Dr. S. H. HABERSHON and Dr. P. S. HICHENS communicated a paper on a case of Pseudo-actinomycosis of the Liver occurring in a lad, aged 17 years, admitted into Brompton Hospital in November, 1897. The symptoms on admission were those of cough with a little expectoration and pain in the right side of the chest. The liver was found to be enlarged. The physical signs observed were those of consolidation or condensation of the base of the right lung. No tubercle bacilli were found. The temperature remained at from 101° to 102° F. with some fluctuations. In December the boy coughed up a collar stud and this was followed by an improvement in the physical condition though not in the pulmonary physical signs. An exploratory puncture was made at the right base without results. The condition remained stationary for some time, but in February, 1898, an abscess formed over the sixth rib in the right nipple line which was incised by Mr. J. Rickman Godlee. The temperature began to assume a remittent type, and while suppuration continued the liver became more enlarged. More than one exploratory operation was made in the hope of finding a collection of pus, but without relieving the patient, who eventually became weaker and died. At the post-mortem examination the disease was found to consist of a collection of caseous masses in the liver, some of which near the upper surface of the right lobe had softened so as to form abscess cavities. The external operation wound communicated with the space between the liver and diaphragm, which was filled with caseous material. The right lung was condensed at the base and collapsed, evidently from old obstruction of the bronchi. The pus from the hepatic abscesses was found to contain pale-yellow or cream-coloured granules differing in colour, but of the same size as actinomycotic bodies, and on preparing cover-slips and stains with Weigert's modification of Gram's solution a fine mycelium was found, more delicate than that of true actinomyces and composed largely of strings of cocci. A description was given by Dr. Habershon and Dr. Hichens of the appearances of the various parts of the caseous liver tissue. In the central caseous areas a definite organism was found presenting under a low power of the microscope the same concentric arrangement of rings as the bodies found in actinomyces. With high magnification these rings were seen to be composed entirely of delicate threads of cocci presenting little or no dichotomy and far more delicate in size than true actinomyces. Dr. Habershon and Dr. Hichens detailed some of the literature of anomalous cases of cösporon and bacillary forms of actinomycosis, and came to the conclusion that though the case presented clinical and pathological features closely simulating actinomycosis it must be regarded rather as a variety of streptothrix infection. Macroscopic and microscopic specimens from this case were exhibited, and a specimen of true actinomycosis of the liver was also shown by Dr. Habershon by way of contrast.—Professor JOHN MCFADYEAN congratulated Dr. Habershon and Dr. Hichens on the interest of the case. His first impression on looking at the microscopic specimens exhibited was one of surprise, because he had in his possession many specimens resembling these which he had always regarded as true actinomycosis.

He was not quite clear as to the distinction between actinomycosis and pseudo-actinomycosis. Presence of these fine threads which tended to take on sporulation might be a point of distinction, but he was not quite satisfied on that point. In the absence of cultures it was difficult to decide. He did not feel sure that these specimens deserved the name of pseudo-actinomycosis.—Mr. S. G. SHATTOCK agreed with Professor McFadyean in thinking that one could not rightly draw any conclusion as to the nature of the organism without making cultures. He would like to ask Dr. Habershon why he thought that this case was one of primary disease of the liver? In cases of actinomycosis there was always some lesion of the intestine, and he suggested that there might have been a healed lesion in this case.—Mr. A. G. R FOULERTON also thought that without making cultures it was difficult to decide as to whether this was actinomycosis or some other streptothrix organism. When stained most of these organisms resembled each other and chain sporulation was common to them al'. He remarked that the streptothrix actinomycotica lately isolated from cases of human infection had been a strictly anaerobic organism, and therefore he would not have expected to get cultures unless they were grown anaerobically. He did not like the term "pseudo-actinomycosis."—Dr. HABERSHON, in reply, said that he had brought the case forward because he wanted help in the identification of the organism. In the recorded cases so few of the organisms were illustrated that it was difficult to identify them. The prefix "pseudo" was undoubtedly a resource of those who felt uncertain about the actual nature of a certain lesion. He confessed that his case might be a variety of true actinomycosis, but he wished to mention that all the six cases which had occurred at the Brompton Hospital had presented different features, and it was the absence of these in the present case which had weighed with him most in regarding it as a pseudo-actinomycosis.

Mr. W. G. SPENCER narrated a case of Spheroidal-celled Carcinoma having the characters of a rodent ulcer growing from sweat glands arising in a so-called supernumerary nipple. The growth originated in a pigmented mole on the outer part of the breast of a woman, aged 58 years, 18 months before removal. The primary growth consisted of spheroidal cells covered by an ulcerating surface, resembling the type of rodent ulcer believed to arise in sweat glands. Mr. Spencer pointed out the interest of the case in that malignant disease commenced in one mole, whilst another unaltered one showed a similar structure; the former representing the actual, and the latter the potential, origin of malignant disease from fœtal rests. Previously recorded cases were referred to.

Mr. SPENCER also narrated a case of Fibroma of the Tongue, the specimen being exhibited. The growth previously to removal occupied the anterior fourth of a tongue, and it proved on microscopical examination to be composed of pure fibrous tissue. The patient was a man, aged 68 years. He had noticed the tumour for five weeks and it had continued to grow in spite of the administration of iodide. It formed a hard white tumour embedded in the muscular substance of the tongue, projecting a little from the under surface and being about three-quarters of an inch in diameter. It was well defined but not separated from the muscular substance by a capsule. It was taken to be an ordinary epithelioma before removal, but there had been no glandular enlargement. Mr. Spencer referred to the rarity of the tumour and its possible origin from fœtal rests in the deeper parts of the raphe of the tongue.

Dr. WILLIAM HUNTER narrated a case of Acute Yellow Atrophy occurring in a woman, aged 47 years, who was admitted into hospital with a history of two weeks' illness. On admission she was delirious and there was intense jaundice. She became comatose and died 24 hours later. It was thought to be a case of cirrhosis of the liver, but at the necropsy the liver showed the usual signs of acute yellow atrophy. It weighed only 30 ounces. There were purpuric hæmorrhages in the skin and hæmorrhages into the peritoneum and intestines. There was slight ascites, but there were no lesions in any other organs excepting the kidneys. On section the liver presented a deep orange-yellow colour. Microscopically, there were three different kinds of change to note. First, the deep red parts showed intense bacterial necrosis. Under a low power there appeared to be a fine-celled infiltration, but under a high power this cellular material was seen to consist of a necrosed disintegration of the liver cells. It was not atrophy but complete dissolution. Secondly, in the yellow portions there were fatty degeneration and infiltration of the liver cells. Thirdly, here and there there was an inflammatory infiltration of certain parts, of a semi-necrotic character, representing the inflammatory reaction around the necrosed areas. As regards the bile ducts the larger ones were quite patent, but the smaller hepatic ducts were blocked with desquamating epithelium. Cultures had been ma'e from the liver, spleen, and gall-bladder. The spleen was sterile, but the gall-bladder and liver contained the bacillus coli. No other organisms were detected. Microscopical examination of the kidney showed that the renal epithelium was in a state of complete degeneration and necrosis, somewhat resembling the hepatic cells. Dr. Hunter had collected records of cases of the disease and found that the average of the first stage in which there was slight jaundice lasted between two or three weeks. In his case it had been two weeks. The second stage, consisting of delirium passing into coma, lasted on an average from two to three days. In his case it was 48 hours. Many of the cases had not been recognised until the necropsy. Turning to the nature of the change in the liver he regarded it essentially as an acute bacterial toxic necrosis. The nature of the organism was doubtful. It was doubtful whether it could be the bacillus coli. The jaundice was probably due to the blocking of the intra-hepatic ducts. He referred to a case of acute yellow atrophy occurring in a child, aged eight years, under the care of Dr. Dawson Williams, who died after an illness of three or four weeks.—Dr. H. MORLEY FLETCHER referred to the question whether the changes of acute yellow atrophy occurred in a liver previously healthy or a liver which had already undergone some pathological change. He thought that in the specimens that were shown there was evidence of some antecedent fibrosis. He had had the opportunity of seeing the case of the child to whom Dr. Hunter had referred and of examining the liver after death. It showed distinct cellular and multi-lobular cirrhosis. Probably there was some infection on the top of this change. Two other cases to which he also referred presented some previous change in the liver. One was a man who was in the hospital for some time with cardiac disease and the usual enlargement of the liver. He was suddenly seized with symptoms of acute yellow atrophy and died. At the necropsy the cardiac liver was confirmed with the acute yellow atrophic changes supervening. Another case was that of a man in whom the changes of acute yellow atrophy were found in the right lobe of the liver, to which they were limited, the left lobe presenting old fibrotic changes.—Dr. A. G. AULD asked whether the nuclei were of inflammatory origin or whether they were the nuclei of the hepatic cells.—Dr. HUNTER, in reply, said that in the degenerated parts there were no nuclei at all left. They were entirely destroyed. In the inflammatory portions there were leucocytes and fibrous tissue-cells. Referring to the nomenclature he could not agree with the term "icterus gravis." It was a legitimate term to use but was open to this objection that it only connoted a severe jaundice, whereas there was a series of cases constituting a group of diseases, some of which died with large swollen livers, others with yellow atrophic livers, yet they all presented severe jaundice. The term "acute yellow atrophy" connoted all the distinctive features of the disease under notice.

HUNTERIAN SOCIETY.

Exhibition of Cases.

A CLINICAL meeting of this society was held on Oct. 24th, Dr. J. DUNDAS GRANT, the President, being in the chair.

Dr. F. J. SMITH showed a case of Cirrhotic Kidney showing well-marked Albuminuric Retinitis. The patient was a labouring man, aged 40 years, who came under Dr. Smith's observation in March, 1900, complaining of headache and shortness of breath. Inquiry revealed that there was also considerable amblyopia, and ophthalmoscopic examination at once showed very marked retinitis albuminurica. He was admitted into the London Hospital and improved with the rest in hospital without any special medicinal treatment, and was discharged at the end of May to the out-patient department. During the summer he complained principally of vomiting and of bad sight, with attacks of shortness of breath, and in October became so bad that Dr. Smith again admitted him into the hospital. Dr. Smith remarked that the patient's symptoms were principally those of ingravescing

uræmia, and he incidentally dwelt upon the great relief to the breathing that had been experienced from venesection a few days previously to his exhibition before the Hunterian Society. Dr. Smith said that his chief reason for bringing the patient forward was that the Fellows of the society might have an opportunity of observing the changes in the retinæ which showed both the glistening patches and the small scattered hæmorrhages remarkably well. In reply to a question Dr. Smith remarked that the prognosis was extremely bad, not only on account of the retinal changes which had almost certainly been present for nearly a year (they must have been of some duration when first observed), but also on account of the persistent and ingravescing character of the uræmic symptoms.—Dr. W. J. McC. ETTLES said regarding the prognosis in albuminuric retinitis that five cases which had come under his observation had each died within three months.

Dr. SMITH also showed a case of Aneurysm of the Thoracic Aorta which had been treated with injections of gelatin. The patient was a man, aged 55 years, with the following history. The heart was known to have been affected for some seven or eight years with aortic valvular trouble and anginal symptoms of some severity had existed for four years. The patient had been in hospital on several occasions and the aneurysmal condition had been recognised beyond doubt by bruits and pathognomonically by a bulging expansile tumour occupying the space over the second and third left costal cartilages. On his earlier admission he was treated with rest and iodide of potassium with considerable relief, but in the autumn of 1899 injections of gelatin were begun. According to the patient's statement there had been great improvement from the injections, of which in the course of the last 12 months he had had about 25. The tumour had practically disappeared. Dr. Smith said that he had brought the patient before the society as a contribution to their knowledge of the treatment of aneurysms by gelatin, the method adopted in this case being at first 50 cubic centimetres of a 2 per cent. solution, later 150 cubic centimetres of the same, and, lastly, 200 cubic centimetres of a 1 per cent. solution. He remarked that the patient's evidence was certainly to be taken as greatly in favour of the procedure, as he certainly felt better and had lost a great deal of the anginal trouble which had been and was even now—though milder—very persistent; but at the same time Dr. Smith himself felt very sceptical as to the genuine efficacy of the treatment, for, among other points, the patient now complained of a pain and great tenderness further out towards the left axilla, and these, though not, perhaps, much noticed by the patient after his severe trials, were to the scientific mind very ominously significant indeed of an extension outward of the aneurysmal sac, and suggested that though it might be improving in one part it was probably spreading extensively in another direction. Dr. Smith felt bound in fairness to record that his colleague, Dr. Percy Kidd, was not troubled with the same scepticism, but felt convinced that much good had resulted from the treatment.

Dr. DAVID ROSS showed a Microcephalic Idiot, a girl, aged three years and four months, who was the eldest child of healthy parents. The presentation was pelvic, but the mother was not quite clear whether she was an eight months' or a full-term child. At birth the child seemed normal and she throve well for two years, though all that time she suffered continuously from convulsions. She had had no other illness, but during the past year she had fallen off considerably. The mother said that there had never been a fontanelle and that the frontal suture had become very prominent though it was not noticeable at birth. Sight seemed to be absent; the child had never taken any notice and she could only be roused by loud sounds. She slept well as a rule and would remain quietly in whatever position she was placed except the upright. The dentition was late and the last molars were only now erupting. She had no control over the passage of urine and fæces and gave no signs of hunger except some peculiar lip sounds, well known now to the mother, and she would take nothing except boiled bread-and-milk. The circumference of the head was very small and there was a reversal of the normal relation of size between the face and the skull. As regards operation in such a case no one would *a priori* expect any benefit to follow.—Dr. R. HINGSTON FOX and the PRESIDENT said that they had known of improvement after craniotomy.—Dr. J. H SEQUEIRA was not in favour of the operation of craniotomy, believing that the condition of the skull was secondary to the deficient development of the brain.

Dr. FOX showed a case of Aortic Disease of at least 11 years' duration. The patient, a woman, now aged 79 years, first came under notice 11 years ago. She had then "a slight rough bruit with the first sound of the heart heard in the aortic region." There were occasional irregularity of the heart's action and inequality of beats. Two years later the apex of the heart was noted to be "displaced a little to the left," and the first sound heard at the apex was not quite clear, the murmur being well heard as before over the aortic area, and the second sound being quite clear and ringing. Five years ago a well-marked rough systolic bruit was described in the aortic region. The present condition of the heart consisted in enlargement, more dilatation than hypertrophy, and in a valvular lesion signified by a rough systolic bruit heard all over the heart area, but loudest and with a creaky quality at the apex. The second sound was short and weak, but was distinct, and was audible also over the carotids. The patient's general health was good for her age, which was nearly fourscore years; she had, however, albuminuria and dyspnœa on exertion.—Dr. T. H. A. CHAPLIN considered that in this case mitral regurgitation had supervened upon the aortic obstruction and placed the heart in a more favourable condition for compensation.—Dr. F. J. SMITH, Dr. SEQUEIRA, and the PRESIDENT also discussed the case.

Dr. FOX also showed a case of Recovery from Rickets. The patient, a girl, now aged nine years and eight months, was brought to him as an infant of 16 months with the signs of rickets. She had never walked. She had only three incisor teeth. The cranium was bossy and the anterior fontanelle was of the size of a shilling. The tibiæ were much bent. The bowels were loose and she had not been weaned. At 20 months the signs continued well marked and the fontanelle was nearly as large as before. At the age of two years and one month she was brought for treatment for a cough. The fontanelle still exceeded a sixpence in size and the legs were markedly bowed. The child could now walk. She was brought to the meeting as exhibiting an instance of good recovery from rickets. The signs were severe and the treatment by drugs (cod-liver oil and red syrup) was not long persisted in. Salt-water sponging, frictions, and regulated diet and hygiene, which were also enjoined, might have been better attended to.

The PRESIDENT showed a test case of supposed Primary Specific Ulceration of the Tonsil. The patient was a married woman, aged 32 years, who was first seen on Oct. 11th, 1900, when she complained of sore-throat of three months' duration. This was followed, after an interval of about a month, by the appearance of a few brownish spots on the skin, and the opinion that these were syphilitic was confirmed by Dr. Alfred Eddowes. There had recently been a slight falling off of the hair. On examination there was found to be considerable enlargement of the right tonsil, with an irregular ulcer in its upper third. The glands in the angle of the jaw were slightly enlarged, but less so than they had been. On the right anterior pillar there was an ill-pronounced opalescent patch and the same in a slighter degree on the left one. There were no symptoms of genital inoculation, but the husband's tongue presented ample evidence of old-standing tertiary changes, with a slight erosion on each side, the primary inoculation in this case dating more than 12 years back. During the first week the patient was treated by means of pills of mercury and opium, but the effect produced was comparatively slight. During the following week mercurial inunctions were practised and immense diminution, both of the subjective and objective condition, followed at once. If the lesion were a tertiary rather than a primary one there was no history obtainable to support this view; moreover, the appearances of the supervention of the secondary stage were not very marked, though they seemed sufficient. The mode of inoculation was absolutely obscure unless they admitted the infectiousness of ulcerated tertiary lesions such as those found on the husband's tongue. The result of treatment seemed, however, to confirm the diagnosis.—Dr. W. H. KELSON instanced a case of syphilitic infection by means of the guillotine.

Dr. T. GLOVER LYON showed a case of Obscure Condition of the Chest in which the diagnosis was aided by means of the x rays. The patient was a boy, aged 15 years. There was no family history of phthisis. He had been quite well up to six months before when he had begun to suffer from general weakness, slight cough without expectoration, and some shortness of breath. On admission there was some emaciation present. The only abnormal chest sign was a very

marked diminution of breath sounds all over the left side. There were some enlarged glands over the right clavicle. The diagnosis had been enlarged glands pressing on the bronchi of the left side. The shadow on the x-ray screen appeared to confirm this. Dark patches of indefinite shape were seen on either side of the shadow of the heart corresponding to the position of the bronchial glands. These were most marked on the left side.

LIVERPOOL MEDICAL INSTITUTION.

Exhibition of Specimens.—Crystallised Albumins.—The Morbid Anatomy of the Glandular Changes in Chronic Endometritis, Simple Adenoma, and of Carcinoma, including Malignant Adenoma of the Uterus.

THE first meeting of the Pathological Section of this institution was held on Nov. 15th, Dr. J. HILL ABRAM being in the chair.

Mr. G. P. NEWBOLT showed: (1) A Malignant Polypus from the Nose for which he had removed the upper jaw; and (2) Growths affecting both Breasts in a woman, aged 64 years for which double amputation had been done.

Mr. KEITH MONSARRAT showed: (1) A specimen of so-called Congenital Hæmatoma of the Sterno-Mastoid. There was a complete absence of blood pigment or anything suggestive of hæmatoma, the specimens showing fibrous and new multiplying muscle tissue; and (2) Sections of a Sacro-coccygeal Tumour, angiomatous in nature. It was considered to have arisen in a mesoblastic remnant at the hinder end of the embryo.

Dr. W. BLAIR BELL showed specimens and photographs of (1) a Volvulus of the Small Intestines round an Adhesion to the Parietes above the Bladder, occurring six weeks after operation for strangulated hernia; and (2) Obstruction of the Ileum due to Plum-stones on the Proximal Side of a large Meckel's Diverticulum.

Dr. W. T. D. ALLEN showed a Stomach upon which Gastro-enterostomy had been done for Carcinoma of the Pylorus. A Murphy's button was found loose in the stomach five months after operation. The patient had hardly any gastric symptoms.

Dr. K. A. GROSSMANN showed Sections of a Glioma of the Retina and a series of Human Embryos of from four to eight weeks' gestation. They were to be used for the study of the development of the eye.

Dr. J. HAY showed specimens of Diffuse Carcinoma of the Lungs associated with Similar Growth in the Left Kidney and Liver.

Dr. R. J. M. BUCHANAN showed Sections from Dr. Hay's case, demonstrating Fuchsin Bodies in the Epithelial Cells.

Dr. J. WIGLESWORTH showed the Calvaria and Brain from a case of Hydrocephalus. The patient, a male, died at the age of 48 years. The brain weighed 2479 grammes and the ventricles contained 1035 cubic centimetres of fluid.

Mr. W. THELWALL THOMAS showed: 1. A Thyroid Gland weighing 2 lb. 6 oz., removed from a woman, aged 21 years. It was of the colloid variety. The patient was up and about on the ninth day. 2. Two large Gall stones that had produced acute intestinal obstruction with fæcal vomiting. In neither case had there been jaundice. 3. A Mixed Oxalate and Phosphatic Calculus weighing five and a half ounces removed by suprapubic operation from a man, aged 54 years.

Dr. NATHAN RAW showed: (1) A specimen of Enormous Distension of the Bladder which had occupied the whole Abdominal Cavity; and (2) a large Strangulated Inguinal Hernia containing the whole of the Intestines.

The specimens were discussed by Dr. ABRAM, Sir W. M. BANKS, Professor W. CARTER, Dr. HAY, Dr. RAW, Dr. BUCHANAN, Mr. THOMAS, Dr. W. ALEXANDER, and Mr. MONSARRAT.

Dr. T. R. BRADSHAW read a note on the preparation of Crystallised Albumins by G. Hopkins's Method and showed well-formed crystals obtained from the white of eggs and horse's serum. The latter were 0·5 millimetre in length and formed hexagonal prisms, terminated by a hexagonal pyramid at one end and a plane base at the other. With polarised light they were seen to be biaxial and with crossed Nicoll's prisms they showed straight extinction. Elementary analysis of the egg albumen crystals washed free from ammonium sulphate by means of a strong solution of sodium chloride and dried at 110° C. showed percentage of C. as 51·66 and of H. as 6·71. These percentages were slightly lower than those Hopkins obtained with alcohol coagula. The egg albumen crystals appeared to be embryonic and were too small for their optical characters and their form to be determined.—A short discussion followed and Dr. BRADSHAW replied.

Dr. H. BRIGGS read a paper on the Morbid Anatomy of the Glandular Changes in Chronic Endometritis, Simple Adenoma, and of Carcinoma, including Malignant Adenoma of the Uterus. The paper was based mainly on the pathological reports of 83 cases of cancer of the uterus treated by Dr. Briggs by vaginal hysterectomy, and of curettings obtained from doubtful or advanced cases of cancer, and in the treatment of chronic endometritis. Dr. Briggs drew attention to the difficulties of diagnosis. He related in his remarks on malignant adenoma of the cervix and body of the uterus an interesting example in which malignant adenoma of the body of the uterus coexisted with simple adenoma of the cervix. He discussed the value of the curette and the examination of the scrapings in relation to diagnosis, and pointed out that in the early stage the microscopical examination of the portions removed showed that malignant adenoma was with difficulty differentiated. He also considered the morbid anatomical tests of malignancy and referred to the relative disproportion between glands and stroma in cases of malignant adenoma. He inclined to the idea that his experience led him to believe that the curette was not curative in certain cases of chronic endometritis. Cases related seemed to point to the fact that malignant adenoma might be a slow process, like rodent ulcer of the face. His experience showed that the proportion between malignant adenoma of the cervix and cervical cancer was as one to 16, which he thought might help to explain the relatively small number of cervical malignant growths cured by radical operation, as compared with corporeal growths which were mostly malignant adenoma.—Mr. F. T. PAUL drew attention to the marked similarity between malignant growths of the uterus and those of the rectum.—Dr G. W. STEEVES considered Dr. Brigg's paper as of great value to the general practitioner as well as to the pathologist.—Dr. ABRAM discussed the value of evidence deduced from microscopical examination of morbid growths.—Dr. BUCHANAN drew attention to the probable assistance in diagnosis to be obtained by the existence or not of cancer bodies in uterine growths.—Dr. BRIGGS replied. (The paper was illustrated by a wealth of material in the form of macroscopic and microscopic specimens, water-colour drawings, photo-micrographs, and lantern slides.)

MANCHESTER PATHOLOGICAL SOCIETY.

Exhibition of Preparations and Specimens.

A MEETING of this society was held on Nov. 14th, Dr. A. T. WILKINSON, the President, being in the chair. Several new members were elected, among them being Dr. Annie M. S. Anderson, the first lady member of the society.

Dr. DAVID ORR and Dr. T. P. COWEN gave a demonstration on Some Features in the Pathology and Morbid Histology of General Paralysis of the Insane.

Dr. THOMAS HARRIS showed preparations from a case of Pulsating Pyo-pneumothorax. The case was that of a man, 32 years of age, in whom an empyema followed an attack of erysipelas of the face. The empyema ruptured through the lung and there subsequently developed a large swelling in the left infra-clavicular region which pulsated synchronously with the heart's action and which felt to the hand exactly like a thin-walled aneurysm; the swelling was, however, perfectly tympanitic on percussion. The man, who was in an extremely feeble condition on his admission to the infirmary, died when the pus was being drawn off from the chest. The post-mortem examination showed very marked necrosis of the pleura at various parts and the pulsating air sac had been formed in the subcutaneous tissue of the chest wall. Dr. Harris referred to the great rarity of so-called pulsating empyema, and he had been unable to find any record of a pyo-pneumothorax where the air sac pulsated.

Mr. F. A. SOUTHAM made some remarks upon the conditions met with in a series of 50 cases of Recurrent Appendicitis treated by Operation; and a number of preparations were shown which illustrated the change produced in the appendix as the result of repeated attacks of inflammation.

Dr. A. HILL GRIFFITH mentioned two cases of Rodent

Ulcer of the Eyelid and showed Microscopical Sections of the same.

Dr. C. POWELL WHITE showed two specimens of so-called Infective Sarcoma of the Vagina of Bitches. The specimens resembled those described by Washbourn and Bellingham Smith. In one of the bitches there was a growth in the mamma having the same structure as the growth in the vagina. Yet the animal recovered after both growths had been removed. Both bitches were infected by the same dog, which also infected several other bitches and finally died as a result of the growths.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

Aphasia.—Micro-organisms in Pus.—Heart Disease.

A MEETING of this section was held on Nov. 2nd, Professor A. C. O'SULLIVAN, the President, being in the chair.

Dr. H. T. BEWLEY exhibited the Brain from a case of Aphasia. The patient was a woman, aged 33 years, who in May, 1897, had an apoplectic seizure. When, after several days, consciousness returned it was found that there were (1) slight paralysis of the lower half of the right side of her face, which soon passed off, and (2) inability to speak. This inability gradually lessened to some extent, but improvement soon ceased, and for the remainder of her life (she died from phthisis in February, 1898, nine months after the apoplectic attack) she was aphasic. The characters of her aphasia were as follows: 1. She was unable to recall the names of familiar objects shown to her, of flavours given her to taste, &c.; she, however, recognised their nature and understood their uses. 2. She understood simple sentences spoken to her—e.g., the request, "Hold up your hand," but not more complicated or abstruse sentences. 3. She could read written or printed words, but she did this slowly and with many mistakes, and the words when read did not bring any idea to her mind. She did not attempt to carry out any directions in writing, although she read the words. 4. She had very little power of voluntary speech; she usually communicated with the nurses by signs and was fully aware of the mistakes she made when trying to speak. She was never able to repeat a word deliberately, although she might have just used the word in a sentence. 5. She could copy words a little. 6. She could not write correctly, except her own name; if told to write some certain word she often wrote down some entirely different words. A hæmorrhage was found to have taken place in the neighbourhood of the left island of Reil, which had destroyed the grey matter of the convolutions of the insula and some of the adjacent white matter. A small cavity occupied the place of these convolutions, and around it was a quantity of yellowish substance containing many granules of hæmatoidin.—Dr. W. R. DAWSON remarked that the island of Reil was fixed upon by Flechsig as his association-centre—a centre in connexion with that of hearing, of the motor organs of speech, and various other centres. If this view were correct the physical element of speech would be damaged in the case of a lesion of this kind.

The PRESIDENT gave particulars of the Bacteriology of a case of Abscess involving the Frontal, Parietal, and Temporal Bones. He isolated from the pus the streptococcus pyogenes and the staphylococcus pyogenes, albus and aureus. The streptococcus proved very virulent, one cubic centimetre of a broth culture injected intra-peritoneally into a rabbit and subcutaneously into a guinea-pig at about 2 P.M. causing death during the same night. Neither variety of the staphylococcus produced any effect when inoculated into guinea-pigs or mice.—Professor E. H. BENNETT said that the patient was a child and the case was an illustration of what was not commonly seen—namely, a combination of tuberculosis with rickets. Long ago, in 1858 or thereabouts, Sir William Jenner wrote the best account of these diatheses, as he called them, and one of the strong points of his description was the rarity of tuberculosis and rickets crossing each other. This child had rickets without doubt, his femora and shin-bones bearing evidence of it. He was six or seven years old when tuberculosis supervened on the rickets and attacked him in many places. Over his left temporal fossa there was an abscess like the other tuberculous ones all over his body.—Professor E. J. MCWEENEY said that it was an interesting thing to find all the various pus cocci in the one specimen.

Dr. BEWLEY exhibited a Heart, the subject of Mitral Narrowing and Aortic Regurgitation. It was taken from the body of a female aged 20 years, who, while apparently in perfect health and without having complained of any symptom of disease, suddenly fell down dead while walking across a yard.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—A general meeting of this society was held at 20, Hanover-square, W., on Oct. 31st, Dr. Douglas Kerr (Bath) being in the chair. The treasurer's balance-sheet for the year ending Sept. 30th, which showed that the financial position of the society was satisfactory, was presented and passed. Votes of thanks to the retiring President (Dr. Ivor Murray of Scarborough), the Council, and the officials of the society were passed.—Dr. Douglas Kerr then introduced the President-elect, Dr. Frederic Bagshawe (St Leonards). 26 new candidates were nominated and the President then gave an address on Some Points in the Development of Seaside Towns, an abstract of which follows. Dr. Bagshawe traced the early history and development of watering-places, specially dwelling upon the steps to be taken for the sanitation and water-supply of such growing towns. Alluding first to the elementary methods adopted in early days and the dangers arising therefrom he showed what system of drainage had come to be employed in various seaside places, and pointed out that while nearly all discharged their sewage into the sea some had direct outfalls and some intercepting drains and tanks, making use of the ebb and flow of the tide to disperse the sewage at suitable times. He further showed that "the close aggregation of towns" around the coasts in certain parts must lead before long to considerable difficulty in the disposal of sewage; and that there was reason to fear lest the sewage discharged from one town might cause nuisance by being carried by the set of the tide and deposited along the shore of a neighbouring town. To remedy this, either some joint scheme must be hit upon by contiguous towns, by which this danger should be obviated, or some means must be adopted by which the solid parts of the sewage could be reduced and the effluent rendered innocuous. Of the various plans of sewage treatment hitherto in vogue a large number aimed at the precipitation of the solid matter in suspension by the addition of chemicals, the resultant sludge being then submitted to pressure and when dry disposed of as manure. This was, however, a costly and unsatisfactory process. Admirably adapted as sewage farms might be to many inland towns, they must remain an impossibility for most seaside resorts, owing to low levels and the want of available lands. The bacterial system seemed to have established itself firmly in the valleys of the Thames and the Exe and in other parts, and to be receiving recognition financially and otherwise from the Local Government Board. The great principle had been evolved that the rapid splitting up of the organic compounds in the sewage matters passing through the filters was due to the activity of the large number of micro-organisms therein contained. The change was no longer accounted for as being a purely chemical or mechanical process. Bacteria worked their ends under two conditions—(1) in the closed or anaerobic beds, and (2) in the open or aerobic beds. The dangers arising from the discharge of sewage in the proximity of oyster-beds had been demonstrated in the recent report of the Local Government Board the shell-fish therein gathered being capable of retaining the specific organisms of enteric fever in an active state for a month at a time. This might be counteracted by the use of the bacterial system, for it had been shown by Lawes and Andrewes that some liquefying organisms had a germicidal effect upon typhoid bacilli, so that their sojourn in a septic tank or their arrest in an anaerobic filter with such organisms diminished their chance of survival. This conclusion had been confirmed experimentally by Dr. R. Pickard of Exeter, who found that 90 per cent. of typhoid bacilli introduced into a septic tank were rapidly removed by bacterial agency. This system had been recently introduced at Morecambe in Lancashire and might prove very valuable where similar conditions prevailed or where seaside towns were closely aggregated. After alluding to the water-supply and other hygienic conditions of health resorts Dr. Bagshawe concluded by insisting on the importance of the presence of medical men on boards of health and sanitary committees, showing the power which they possessed of furthering the

efforts of the medical officer of health in the cause of sanitation by the direct personal influence which they could bring to bear upon these bodies.—Dr. Robert Lee (London) proposed, and Mr. Ward-Humphreys (London) seconded, a vote of thanks to Dr. Bagshawe who briefly replied.

FORFARSHIRE MEDICAL ASSOCIATION. — This society met in the University College, Dundee, on Nov. 1st, Mr. C. S. Young, Vice-President, being in the chair.—Professor J. A. C. Kynoch showed a specimen of an Ovarian Tumour removed by operation per vaginam from a patient from whom he had removed a similar but larger tumour by the abdominal route He gave the reasons for his change in operation and discussed the relative merits of the two operations, preferring the latter should it be at all possible.—A number of pathological specimens were sent to the meeting by Professor L. R. Sutherland from the pathological museum, some of which had been presented by Sir William Gairdner.—Dr. A. McGillivray read a paper on Advancement *versus* Tenotomy in the Surgical Treatment of Concomitant Strabismus and its Treatment by Optic and Orthoptic Means. The merits of the two methods of surgical interference were discussed, convergent strabismus being taken as an example. Advancement was shown to be more rational, being based on etiology and having for its object the strengthening of the disused, and therefore weakened, external recti instead of the weakening of the unimpaired internal recti by tenotomy. Both external recti should be advanced at the same time, as the condition was a bilateral one. Cases were shown to demonstrate the above points.—Professor A. M. Stalker gave an account of a case of Visceral Syphilis. The patient, a man, aged 47 years, was admitted into the hospital suffering from steady emaciation with a history of hæmatemesis four months previously but without the symptoms or physical signs of gastric disease. There was no indication of syphilis. He died and at the post-mortem examination the fatal lesion was found to be a stricture of the jejunum four feet from the pylorus due to a cicatrised ulcer. In addition there was a healed ulcer of the stomach and extensive fibrosis of the heart, associated with arterio-sclerosis and blockage of the coronary arteries.—Dr. C. Kerr confirmed the diagnosis from his attendance and treatment of the members of the same household.—Dr. W. E. Foggie described the Nervous Sequelæ found in a man five months after he had been injured by a fall from a height of 40 feet, which had apparently resulted in unconsciousness, retention of urine, and severe bruising but no evident fracture. His present condition showed partial rectal and genital paralyses, symmetrical areas of thermoanæsthesia and analgesia over both heels enclosing much smaller areas of tactile anæsthesia, numbness and impaired sensation around the anus, increased knee-jerks, and pain in the bladder and urethra as well as over each side of the small of the back. These phenomena pointed to a hæmorrhage into the cord involving to some extent the sacral segments from the second to the fifth, and probably also their roots, unless the irritative phenomena above mentioned were secondary to the cystitis still present.—Dr. J. Mackie Whyte asked if there was any relation between the sensory supply of the anus and that of the heels that would explain the above case, which did not seem in harmony with Head's diagrams.—Dr. Foggie, in reply, acknowledged the difficulty and could only suggest that the cord had been injured in more than one place and at different levels.—Dr. Mackie Whyte gave an account of a case of a quarryman, who had had during the last year and a half frequent attacks of dyspnœa with some cough and slight expectoration. The physical signs were those of chronic pneumonia. The patient died during an attack of dyspnœa. These frequent attacks were characterised by their sudden cessation. The post-mortem examination showed the lungs to be those of a case of pneumokoniosis.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.—The annual general meeting of this society was held on Nov. 9th, Dr. Barclay J. Baron the President, being in the chair.—The officers for the ensuing year were appointed, Mr. Mayo Collier being elected President.—Mr. Lennox Browne reported the case of a patient the subject of Epithelioma of the Larynx from which a (presumably) benign growth had been removed nine years previously. Mr. Browne remarked that although no microscopical examination had been made in the first instance it was not reasonable to suppose that recurrence would have been delayed so long had the case been one of squamous epithelioma, as was revealed on the more recent occasion.—Mr. V. H. Wyatt Wingrave showed slides which illustrated the undoubtedly malignant nature of the removed tissue.—Mr. Lennox Browne also reported two cases of Epilepsy which had been benefited by removal, in the first case, of tonsils and adenoids from a child, aged five years, the subject of epilepsy in a grave form and with mental hebetude, and in the second case by removal of adenoids from a female patient, aged 19 years, the subject of *petit mal*. It was a feature of note that in both cases bromide of potassium had been given in enormous doses without benefit before the operation, but it had proved most effective in very small doses (three grains) afterwards.—Mr. W. J. Chichele Nourse showed a middle-aged man with Papillomatous Growths on the Left Vocal Cord.—Mr. E. Dennis Vinrace showed a patient with extensive Ulceration of the Tongue.—Dr. J. Dundas Grant considered the disease to be epithelioma engrafted upon tertiary syphilitic infiltration.—Mr. Mayo Collier said that the origin of the disease was no doubt syphilis; there were two ulcerating craters, doubtless, breaking down gummata.—Mr. Wyatt Wingrave, Mr. Lennox Browne, and Dr. James Wilson (Liverpool) also spoke.—Dr. Dundas Grant read notes of a case of Nasal Synechia in a girl, aged 19 years. There was no history of injury, but the prominent symptom, pain across the bridge of the nose, had followed an attack of influenza two years ago.—Dr. Dundas Grant also showed a case of Rapid Enlargement of the Cervical Glands in an elderly woman for which no peripheral cause was found. The diagnosis lay rather between tubercle and some form of new growth.—Mr. Wyatt Wingrave showed a case of Congenital Syphilitic Ulceration of the Nose in a female, aged 20 years. There was extensive scarring in the pharynx and widespread granulomatous ulceration in both nostrils. Marked improvement followed mercurial treatment.—Dr. Dundas Grant said that he regarded the case as one of lupus.—Dr. F. J. Tresilian (Enfield) showed a case of Old-standing Tertiary Syphilis of the Nose, Pharynx, and Larynx in a man, aged 40 years. The larynx showed relics of extensive disease and there was a subglottic stenosis in the upper part of the trachea.—Dr. Tresilian also showed a girl, aged 16 years, with a large new Growth in the Right Lobe of the Thyroid Gland and Abductor Paralysis of the Right Vocal Cord due to pressure on the recurrent laryngeal nerves.—Mr. Dennis Vinrace showed a case of Cleft Palate.—Dr. W. H. Kelson showed a man, aged 30 years, with well-marked Exostoses in both External Auditory Meatus.—The newly-elected President (Mr. Mayo Collier) having taken the chair then delivered an address upon Mouth-breathing and its Relation to Diseases of the Throat, Ear, Nose, and Accessory Cavities. This address will be found at page 1478.

SOCIETY OF ANÆSTHETISTS.—An ordinary meeting of this society was held on Nov. 2nd, Dr. J. F. W. Silk, the President, being in the chair.—Mr. Carter Braine communicated the particulars of a case in which Alarming Symptoms ensued when the patient was placed in the Trendelenburg Position. The patient was a thin, feeble woman, 28 years of age. Anæsthesia was induced with gas and ether and the patient was placed in the Trendelenburg position. After the incision in the abdominal wall had been made chloroform was used instead of ether. Mucus collected with great rapidity in the pharynx, the breathing became laboured, and there was marked cyanosis. The symptoms were relieved when the patient was restored to the horizontal position, but they immediately appeared again when the Trendelenburg position was used.—Dr. Dudley Buxton thought that the condition could be ascribed to some vasomotor idiosyncrasy on the part of the patient.—Mr. A. E. Francis of University College read the notes of a case in which the administration of Nitrous Oxide to a girl, 10 years of age, gave rise to slow, shallow respirations, great lividity, and enormous venous distension, the heart on auscultation and percussion being found to be distinctly distended and a systolic murmur being heard over the displaced apex. Both before and after the administration the heart was of normal size and there was no abnormal murmur. The recovery was good and on a subsequent occasion when chloroform was used no trouble followed.—Mr. H. C. Grouch, Dr. R. J. Probyn-Williams, Dr. Dudley Buxton, and Mr. J. R. Fuller discussed the case.—Mr. Francis replied.—Dr. G. B. Flux described a Valveless Stopcock for the administration of Nitrous Oxide by the Open System. The instrument consisted practically of two tubes, one rotating within the other, so as to open or to close the opening

into the gas-bag. The inner tube was bevelled off so as to form an inclined plane by means of which the gas was directed into the face-piece, and there was always a large air-opening, the weight of the gas being relied upon to prevent undue admixture with air.—Dr. Probyn-Williams, Dr. H. Low, and the President took part in the discussion and Dr. Flux replied.—A communication from Mr. W. G. Copestake of Derby was read commenting on two recent deaths under chloroform.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting of this society held on Nov. 7th a presidential address on Modern Sanitation was delivered by Mr. G. B. Wray, the President.—After referring to the sanitary enactments of the last 25 years and the difficulties experienced in getting rural district councils to adopt any of them he advocated the establishment of a Board of Health (detached from any connexion with Poor-law administration) to administer a new consolidated and amended Public Health Act, together with the Factory, Workshop, and Burial Ground Departments of the Home Office, and the Veterinary Department of the Privy Council, with an efficient staff of experts to act as inspectors, part of whose duty should be periodically to visit and to report on the sanitary condition of every district in the country. He also recommended the appointment of whole-time medical officers of health for every county, an increase in the powers of county councils, and the formation of combined districts for sanitary administration. After a lengthy description of experiments which he had been carrying out on the biological treatment of sewage, Mr. Wray laid special stress on the work done by the macroscopic agents of nature, such as worms and flies, and he urged a more vigorous enforcement of the Rivers Pollution Act to reclaim our dykes and streams and rivers from the opprobrium of being looked upon as open sewers. Attention was then drawn to the unsatisfactory condition of the houses of the working-classes and the many difficulties in the way of abating nuisances from overcrowding in rural districts, both of which were strong factors in fostering and propagating tuberculous diseases. A short allusion was made to the means which were being, and which might be, taken for the suppression and prevention of these diseases, and credit was given to the authorities who had done good work in this connexion by the registration and inspection of slaughter-houses, the inspection of meat, and the adoption and enforcement of regulations under the Dairies, Cowsheds, and Milkshops Orders.—A hearty and unanimous vote of thanks, which was proposed by Dr. H. Handford, seconded by Mr. T. Davies Pryce, and supported by Dr. W. B. Ransom, was accorded to Mr. Wray for his able and interesting address.

MANCHESTER THERAPEUTICAL SOCIETY.—The annual meeting of this society was held in Owens College on Nov. 7th. The following gentlemen were elected to be the officers for the session 1900–1901:—President: Professor J. Dreschfeld. Vice-Presidents: Professor Dixon Mann and Dr. A. T. Wilkinson. Honorary Treasurer: Dr. R. T. Williamson. Honorary Secretary: Dr. R. B. Wild. Committee: Dr. A. Brown, Dr. F. J. H. Coutts, Dr. T. N. Kelynack, Dr. E. Vipont Brown, Dr. J. S. Bury, and Dr. E. S. Reynolds.—The President, after referring in feeling terms to the loss which the society had sustained in the death of Professor D. J. Leech—who, though already showing signs of his fatal illness, gave a communication on Saline Baths at the last meeting—delivered an address on Rectal Feeding. He stated that rectal feeding was an important and useful addition to the methods of treating disease, but in many cases it was ordered without careful thought and without proper directions to the nurse as to the quantity and kind of food to be thus administered. A sufficient amount of food to keep up the body-weight might not be given, but nutrient enemeta might aid by diminishing the rapid decrease of body-weight. The capacity of different parts of the bowel for the digestion and absorption of the different elements of food was then considered, and reference was made to the varying views which had been expressed on some of these points. He then gave details of the methods of compounding various nutritive enemata which had been found useful by clinicians, and spoke of his experience in their use. Next came the question of the indications for the employment of rectal feeding and then an exhaustive list of the conditions demanding this treatment either alone or supplementary to feeding by the mouth was brought forward.—Professor DIXON MANN pointed out that though egg albumen was absorbed from the rectum, albuminuria was sometimes found to occur, which would indicate that the albumen had not been retained by the tissues. Bacterial decomposition of nutrient enemata sometimes took place, as was shown by the presence of indican in the urine.—Dr. Bury, Dr. A. Hopkinson, and Dr. Wild also spoke.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The second meeting of the session of this society was held on Nov. 14th, Dr. D. S. Davies being in the chair. Before commencing the business of the evening the President in feeling terms referred to the death of a Past-President of the society—namely, Mr. S. H. Swayne, who had at all times been a most regular member.—Dr. J. Michell Clarke showed: (1) A case of Tumour in the Inter-peduncular Space; (2) a case of Tumour in the Motor Area of the Brain; (3) a case of Tumour of the Brain in a boy, aged eight years; and (4) a case of Progressive Muscular Atrophy commencing in the Shoulder Muscles.—Dr. E. H. E. Stack commented on the case of the cerebral tumour in the boy.—Mr. C. A. Morton showed: (1) A case of Diffuse Overgrowth of the Tissues of the Thigh; (2) a case of Congenital Varix of One Lower Limb, the Perineum, and the Penis; and (3) a case of Congenital Dislocation of the Hip, with Skiagram.—Dr. A. Ogilvy showed patients with Congenital Anomalies of the Eyes.—Dr. T. Fisher showed a patient with Congenital Stenosis of the Pulmonary Artery, and Specimens of the Aorta and Pulmonary Artery arising from the Right Ventricle, and of the Aorta arising from the Right Ventricle, and the Pulmonary Artery from the Left Ventricle.—Dr. James Swain showed two sets of Multiple Calculi which he had removed by suprapubic cystotomy, and a Columnar Epithelioma removed by Colectomy, all from aged patients.—Mr. Morton, Mr. J. Ewens, and Dr. Stack spoke on the subject.—Dr. A. B. Prowse showed a specimen of Cardiac Embolism.—Mr. G. Munro Smith showed a skiagram of a case of Stave of the Thumb, and a specimen from a child in which death was caused by the Impaction of a Piece of Walnut in the Larynx.—Dr. E. W. H. Groves read a paper on Eclampsia.—Dr. Aust Lawrence and Dr. W. C. Swayne discussed the paper.—The reading of Mr. W. Roger Williams's paper on Medical Science in the Nineteenth Century, and of Mr. Paul Bush's paper on Hospital Treatment during the War in South Africa was postponed.—Mr. Paul Bush showed upwards of 200 lantern slides illustrating scenes during the Boer War.

BOURNEMOUTH MEDICAL SOCIETY.—The annual meeting of this society was held on Oct. 26th in the Hôtel Métropole, Dr. James Davison, the President, being in the chair.—The President referred to the loss which the society had sustained by the death of Dr. D. C. Embleton, a former President of the society, and he proposed, and the society passed, a vote of condolence with Mrs. Embleton and the family.—The report and financial statement for the year 1899–1900 were considered and adopted.—The President thanked the members of the society for the cordial support which they had given him during his year of office and he then introduced Dr. Arthur Ransome, F.R.S., the President-elect.—Dr. Ransome thanked the members for electing him as President and said that he would do whatever he could for the welfare of the society. He then proposed a very hearty vote of thanks to the retiring President for the way in which he had discharged his duties.—This was carried by acclamation.—On the nomination of the outgoing committee Mr. A. H. Vernon, Dr. D. M. Ross, and Dr. W. H. L. Marriner were elected treasurer, secretary, and librarian respectively.—The following members were elected on the committee for the year 1900–1901:—Dr. A. C. Coles, Dr. James Davison, Mr. T. Fred. Gardner, Dr. Marriner, and Mr. J. R. Philpots.—The business of the meeting having concluded 35 members and six visitors dined together. It was mentioned by one of the founders of the society that this meeting was the silver jubilee of the society, which was founded in 1875 and, therefore, a notable occasion.

WATER SUPPLY OF WELLS.—At a meeting held at Wells, Somerset, on Nov. 13th, under the presidency of the Mayor, it was resolved that it was expedient for the city council to acquire the undertaking of the Wells Water Company. It was stated that the water company had not kept their promise of giving a better supply and that the medical officer of health had also complained of the existing state of affairs.

Reviews and Notices of Books.

Occasional Lectures on the Practice of Medicine. By W. B. CHEADLE, M.D. Cantab., F.R.C.P. Lond., Senior Physician to St. Mary's Hospital, and Lecturer on Medicine in St. Mary's Hospital Medical School, Consulting Physician to the Hospital for Sick Children, Great Ormond-street. London: Smith, Elder, and Co. 1900. Pp. 324. Price 7*s.* 6*d.*

THIS volume consists of lectures addressed chiefly to the students of St. Mary's Hospital Medical School, to which are appended Dr. Cheadle's well-known Harveian Lectures on the Rheumatism of Childhood which have been "revised and corrected up-to-date." "These lectures were designed," says the author in his preface, "for the assistance of students in the everyday work of their profession by directing attention to some common errors in medical practice and by setting forth the importance of certain points in relation to the diagnosis and treatment of disease which are not dealt with in detail in the text-books, are rarely treated adequately in clinical teaching, and which are therefore apt to be neglected or overlooked in actual practice." Dr. Cheadle has succeeded admirably in his task. Each lecture is replete with information and contains numerous valuable hints, the result of prolonged experience and careful observation.

The first lecture is entitled "The Use and Abuse of Tonics." The subject is certainly one which merits attention as numerous fallacies are prevalent with regard to it. The laity are strongly imbued with the idea of "strengthening medicine," and yet a physician would be puzzled to give a definition of such. Dr. Cheadle draws attention to the general want of discrimination in giving tonics, or rather the lack of suitable preliminary treatment before the administration of such drugs as strychnia, iron, or arsenic. The sense of debility experienced by patients is frequently caused by the accumulation of waste products in the body and these must be eliminated before the ordinary "tonics" can exert their beneficial effects.

The lecture on the Clinical Uses of Opium will also be found instructive, the indications for and against its employment being clearly laid down.

Two lectures are occupied with the discussion of Some Practical Points in the Treatment of Diseases of the Lungs and Air-passages. We can cordially recommend a perusal of Dr. Cheadle's remarks to young practitioners. The methodical treatment of bronchitis is of the greatest importance, whilst the routine method of prescribing "ipecacuanha, squill, and ammonia" in all cases of bronchitis and in all stages of the disease cannot be productive of successful results and certainly cannot be regarded as a high form of medical art. The author therefore details the various therapeutical measures which should be adopted in treating a case of bronchitis from the commencement of the attack. Equally good are the remarks on the treatment of pneumonia and pleurisy.

Twenty years ago Dr. Cheadle first drew attention in this country to the occurrence of scurvy in infants in sporadic form. In Chapter IX. he gives the results of his large clinical experience on this condition. He remarks that the earlier observers in Germany regarded and described infantile scurvy as an acute form of rickets, but the essential independence of scurvy has been generally accepted by the leading authorities in Europe and America. He enters fully into the considerations which led him to adopt this view. An interesting table is given of 61 cases of infantile scurvy showing the age at which the disease appeared, the exact diet of artificial food on which the scorbutic state followed in each instance, and the result of treatment by anti-scorbutic diet.

The lectures on the Rheumatism of Childhood are too well known to need any further remarks from us in order to indicate their object and scope.

Thomas Sydenham. By J. F. PAYNE, M.D. Oxon. London: T. Fisher Unwin. With a Frontispiece. Large crown 8vo. 1900. Pp. xvi.-264. "Masters of Medicine" Series. Price 3*s.* 6*d.*

IN the Oxford Museum—an allegory in building invented by Acland and Ruskin, which forms part of a plan to represent the whole orderly creation, the Kosmos, in such a way as to make it intelligible to the student—the history of medicine is represented by five statues. Sydenham, the typical practitioner among the moderns, stands in the centre. On his right is John Hunter, who for the interpretation of disease, its causes, its prevention, and its cure searched through every form of life in the great Book of Nature. On the other side of Sydenham stands Harvey, who solved the problem that had been unsolved from all time. These three built on the foundations reared by Aristotle and Hippocrates, who complete the story.

Dr. Payne in his account of Sydenham has shown how he brought back the exponents and students of physic to observation and its conclusions and removed them from speculations without data and from misinterpreted authority. No living physician is better fitted for this task than is Dr. Payne, the Harveian Orator who spoke of Harvey and Galen, and the author of the introduction to Linacre's translation of Galen's "De Temperamentis." Dr. Payne, too, is the Harveian Librarian at the Royal College of Physicians of London and was formerly a Fellow of Magdalen College, Oxford, and Sydenham was intimately connected both with London and with Oxford. Dr. Payne has been at much trouble to construct his biography from original sources and he has been so successful that he has produced one of the most readable, as it is certainly one of the most scholarly, volumes which have as yet appeared in the series of "Masters in Medicine." He traces out the early and adventurous history of his hero with the greatest care and adds innumerable fresh incidents in Sydenham's career.

Thomas Sydenham was baptized on Sept. 10th, 1624, and died on Dec. 29th, 1689. He came of an old Dorsetshire family, being the fifth son of William and Mary Sydenham of Wynford Eagle, a hamlet lying about eight miles from Dorchester. From the beginning of the Civil War the father and his sons fought against the King and in the summer of 1644 Mrs. Sydenham, the mother, was killed by Royalist soldiers. In the following February Francis, a major in the Parliamentary army, was killed in battle. William, the eldest brother, was a well-known Cromwellian colonel, at one time in command of all the Parliamentary forces in Dorsetshire and afterwards of sufficient importance to be specially exempted from the Act of Indemnity passed when Charles II. came to his own again. Thomas bore arms under his brother in the campaign in the west and again in 1651, when he was a captain of horse and rendered important services to the Council of State, though, fortunately perhaps, he was absent from England at the time of the Restoration. In the Scotch campaign John, another brother, was killed, and Thomas petitioned the Protector for the arrears of his brother's pay. At Cromwell's special desire £600 were ordered to be paid to Sydenham out of certain moneys belonging to the Commonwealth in the hands of the commissioners for coal dues in the port of Newcastle. The £600 served Sydenham for a marriage portion, as Dr. Payne very acutely suggests, and he shortly after settled down to the practice of physic as a means of livelihood. So stirring an

introduction to life was not without its effects upon the character of Sydenham, and Dr. Payne is careful to point out that "if tales of fighting and bloodshed should seem to be of little moment in the life of a physician we should remember that this rough school of warfare formed a part of Sydenham's education. It was essentially a school of revolt, good or bad as we may choose to think it, and must have had a share in forming the character of one who brought into matters of thought and science the courage of a soldier and the independence of a rebel."

Sydenham received a broken education at Oxford, first at Magdalen Hall and then at Wadham, the home of those who founded the "Invisible College"—as the Royal Society was called at the beginning of its career—and afterwards he became a Fellow and Bursar of All Souls. He was created a Bachelor of Physic in the University on April 14th, 1648, by command of the Earl of Pembroke, when he was still at the commencement of his medical studies, and it was not until June 25th, 1663 that he obtained a licence to practise from the Royal College of Physicians of London. In the interval he had been a candidate for a seat in Parliament, he had filled the office of Controller of the Pipe, or Registrar of Leases granted by the Crown, and, more than all, he had visited Montpellier and learnt his business at the feet of Barbeyrac.

The Great Plague of 1665, by enforcing a holiday, led Sydenham to write his first book, a small octavo of 156 pages, which would make two longish articles in a modern medical journal. It was a treatise on Fevers the outcome of his own observations, and he dedicated it to Robert Boyle. Several shorter contributions followed from time to time, though Sydenham was not fond of writing and ill-health and want of leisure made composition difficult to him. From these shorter writings comes his classical account of gout, to which he was a martyr for many years, and we learn that he gave steel filings as a chalybeate and introduced a fluid laudanum—still known as Sydenham's laudanum and analogous to the wine of opium—in preference to the solid laudanum which had been hitherto prescribed. All the writings are in Latin, and Dr. Payne again examines the vexed question of the language in which Sydenham wrote. He arrives at the conclusion that it was terse English translated and amplified for the press by Dr. Mapletoft, one of his medical friends, and by Mr. Gilbert Havers, a non-medical graduate of Trinity College, Cambridge.

Whilst Dr. Payne gives Sydenham every credit for the great advances he made in the study of medicine he is quite impartial and shows the points wherein he was ignorant. He failed entirely to perceive the importance of anatomy and physiology. He spoke with great contempt of morbid anatomy, saying that "others have more pompously and speciously prosecuted the promotion of this art [medicine] by searching into the bowels of dead and living creatures, as well sound as diseased, to find out the seeds of disease destroying them, but with how little success such endeavours have been and are likely to be attended, I shall in some measure make appear." It was the especial merit of Sydenham to proclaim the great truth that science was, is, and always must be incomplete, and that danger lurks in the natural tendency to act upon it as if it were complete. Dr. Payne, therefore, well says that whilst Harvey was the master of science Sydenham was the master of practice.

Dr. Payne introduces many interesting incidents into his work. He gives an account of the condition of Oxford and of the origin of the Royal Society, he paints a picture of the physician's practice in the seventeenth century, and he tells many good stories. Amongst others he says that Sydenham was one day sitting at his open window in Pall Mall overlooking the Mall in St. James's-park (for the south side of the street had not yet been built) "with his pipe in his mouth and a silver tankard before him, when a fellow made a snatch at the tankard and ran off with it. Nor was he overtaken before he got among the bushes in Bond-street, and there they lost him."

The portrait placed as a frontispiece is from a direct photograph of the painting in the possession of the Royal College of Physicians of London, which is, according to the highest authorities, the work of Mrs. Mary Beale, whose son, Bartholomew, was one of Sydenham's pupils.

The biography is dedicated to Sir Samuel Wilks, and the author expresses his indebtedness to Dr. J. B Nias for placing at his disposal some notes on the Sydenham family. As in the other volumes of the series the book is provided with an excellent index.

Kurzgefasstes Lehrbuch der Kinderheilkunde für Aerzte und Studierende. (*A Concise Text-book of the Therapeutics of Children's Diseases for Practitioners and Students.*) By Dr. CARL SEITZ. Second edition, enlarged and revised. Berlin: S. Krager. 1901. Super royal 8vo. Pp. 499. Price 11*s.* net.

WHEN the author was invited by the publisher to write a compendium of children's diseases his original idea was to produce for the benefit of students and practitioners a guide in which, firstly, the clinical aspects of these maladies should be portrayed fully and yet concisely, and in which, secondly, special attention should be paid to the physiological peculiarities, hygiene, and dietetics of childhood, and to the methods of examination. It was found that even by discussing these subjects with extreme brevity the limits of a compendium were exceeded and the book had to be written on a larger scale. In this, the second edition, it has widened its borders still further in order to keep pace with recent advances in our knowledge of the complaints of childhood. The chapters on diphtheria, tubercle, rickets, and morbid changes in the blood have been revised and enlarged; additions have been made to the sections on cerebro-spinal meningitis, diseases of the nose, throat, and larynx; while the paragraphs on general defective vitality, chondrodystrophia and osteomalacia are altogether new. The size of the book remains unaltered owing to the employment in several places of smaller type.

We have found the book as a whole disappointing, the result probably of the conditions under which it has been written. The author, we think, has fallen between two stools. His book has ceased to be a compendium and has not yet become precisely anything else. It has, at all events, deviated from the somewhat narrow path on which it appears to have set out and shows a decided tendency to become a systematic text-book of children's diseases. Of this altered inclination the title-page seems to be unaware for it continues to assert that the subject of the volume is the therapeutics of children's diseases. The result of this discrepancy is to render the task of criticism a somewhat difficult one. Do we criticise the author's pathology and symptomatology? The title-page reminds us that the book only professes to be a text-book of therapeutics. A consideration of the amount of space devoted to systematic description, however, shows this position to be untenable—for example, of seven pages devoted to tuberculous meningitis only one is occupied with treatment. Of nine pages on scarlet fever two are concerned with prophylaxis and treatment. Of some 18 pages given to diphtheria only seven deal with these points. Do we ignore the pathology and symptomatology? In a volume of 499 royal octavo pages devoted principally to the therapeutics of children's diseases we have a right to demand a fuller treatment of this subject than obtains in this volume. No student, however, need be deterred from reading Dr. Seitz's book by the suspicion that it is written on too elaborate a scale, for, as a matter of fact, the author's directions as to treatment are quite simple and straightforward. So far,

indeed, from being too elaborate, they even share the defects of the systematic portion—that is to say, they are marred by a certain superficiality reminiscent, perhaps, of the origin of the work. The trail of the compendium, if we may be allowed the expression, is over them all.

The book is divided into two parts, the first of which is distinctly the better of the two. It treats: 1. Of the physiological and anatomical peculiarities of childhood. This section is perhaps the most satisfactory in the book. 2. Of the rules according to which children should be fed and clothed. Here some useful tables will be found. One gives an analysis of 35 infants' foods; another of 70 common articles of diet in reference particularly to the proteids, fats, and carbohydrates which they contain. In this section we find no fewer than 16 ways of preparing food for bottle-fed infants, and apparently the practitioner is supposed to try the various recipes in turn till he happens to light on one which suits his patient. Compared with the scientific yet simple methods advocated by Rotch and other Americans Dr. Seitz's plan seems somewhat crude. 3. Of methods of examination which are also well described. 4. Of the general principles of treatment. Here the author rightly emphasises the value of hydrotherapeutic and other non-medicinal remedies in infancy.

Part II. is devoted to the consideration of individual diseases in detail, and it is here that the superficiality which we have referred to becomes most apparent. Only half a page is devoted to the etiology of rickets, and it is nowhere suggested that an insufficiency of fat in the food may have anything to do with the causation of the disease. While other factors, such as unhygienic surroundings and wasting maladies, play their part, a theory as to the pathogenesis of rickets which is supported by much evidence should not have been entirely ignored. In the treatment of ordinary cases besides phosphorus, adrenal substance and thyreoidin are recommended. Under "General Defective Vitality" Dr. Seitz groups those children who without discoverable organic defect are congenitally unfitted to assimilate sufficient nourishment—cases, in fact, of atrophy which are not the result of dyspepsia, a convenient distinction.

We think that the author could make a fine text-book of this volume. We have pointed out its defects, and in its next edition we hope to see them removed.

On Diabetes Mellitus and Glycosuria. By EMIL KLEEN, Ph.D., M.D. London: Baillière, Tindall, and Cox. 1900. Pp. 313. Price 10*s.* 6*d.*

DR. KLEEN'S experience as a physician in Carlsbad has given him exceptional opportunities to study the occurrence, symptoms, pathology, and treatment of diabetes and the present volume is the result of his observations and experiments.

The author very rightly takes a broad view of the subject and he is to be congratulated on the way in which he has set forth the conclusions at which he has arrived. We note particularly the stress which he lays on glycosuria as a condition apart from true diabetes mellitus. Under the latter condition are usually included different pathological conditions which are imperfectly understood but which are characterised by a faulty metabolism as a result of which, under ordinary diet, there takes place the excretion in the urine of an abnormally large amount of sugar. Thus diabetes mellitus is not a clinical unit but a syndrome, the chief and most constant symptom of which is glycosuria, which is represented by very varying clinical types. As Dr. Kleen points out in his first chapter, there are numerous cases attended with the excretion in the urine of minute yet distinctly pathological amounts of sugar, which cases differ widely in clinical aspect and in prognosis from the diabetic type, and which should not be included in the designation "diabetes mellitus," and it is more particularly from the point of view of prognosis that the practitioner will do well to carefully observe and classify all cases which yield proofs of the presence of sugar in the urine. When the power of consuming the ingested and digested carbohydrates is but little, or momentarily, impaired, and when the pathological excretion of sugar under ordinary mixed diet only slightly exceeds the traces of sugar found in normal urine, or is but transitory, the condition must not be considered one of diabetes mellitus, but of simple glycosuria. When, however, the excretion of sugar becomes considerable and more persistent but disappears when the carbohydrates are decreased or withdrawn from the food, the condition then prevailing, and which generally is accompanied by other more or less well-defined symptoms, Dr. Kleen suggests should be known as the "mild stage of diabetes," whilst he considers that the severe stage of diabetes is characterised by the occurrence of glycosuria even when the carbohydrates are withdrawn from the food. We quite endorse this classification, although the limits thus fixed are far more distinct on paper than in the reality of clinical experience.

The chapter on the Geographical Distribution of Diabetes Mellitus contains much interesting information. Of all races, the Hindu is most susceptible to diabetes. One authority (Bose) estimates the number of deaths from diabetes in Calcutta at 10 per cent. of the entire mortality. Next to the Hindus the Jews are highest in the scale of diabetic frequency. Dr. Kleen has come to the conclusion, from the researches of Abeles, Meritz, and others, and also from his own investigations, that there is a trace of glucose in normal urine and that the amount in 24 hours scarcely exceeds one-thousandth of 1 per cent. Some slight or occasional increase beyond this may often occur without noteworthy significance, but as soon as hundredths or tenths per cent. are reached the condition must be considered pathological.

Dr. Kleen further points out that although simple glycosuria often shows a decided tendency to remain unaltered for decades in spite of all sorts of pernicious influences, yet mild diabetes certainly not infrequently develops gradually from simple glycosuria, but it usually remains of the mild form.

The chapter on the Symptoms and Complications of Diabetes Mellitus is well written. The descriptions are full and complete and the illustrative cases are printed in a different type to that of the general letterpress—a plan which has obvious advantages. There is also a short, but interesting, chapter on "Diabetes Infantilis."

The theory and pathogeny of diabetes are discussed under the heading of "Metabolism and Nutritive Needs." The amount of work required in preparing material for this chapter must have been immense and we can strongly recommend a perusal of it to those who wish for a thorough knowledge of the subject.

Some useful hints are given in Chapter VIII., entitled "Investigation of a Case of Diabetes," the first and most important rule being never to use for a test a specimen of urine passed when the patient's stomach is empty before the first meal of the day. This is a point which is frequently forgotten, with the result that a false impression of the case is received.

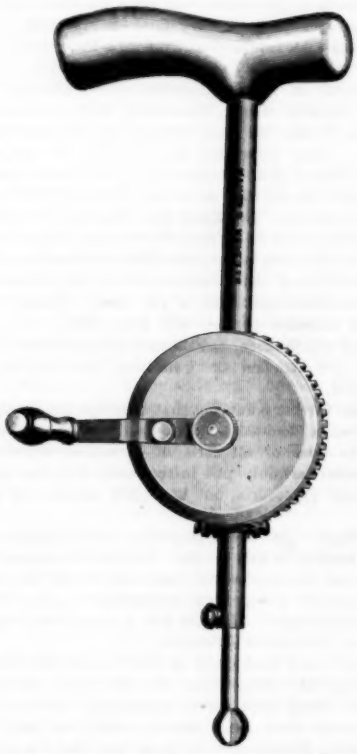
In the last chapter the principles of the treatment of diabetes mellitus are clearly and succinctly laid down. A rational diet must be followed, rather than an absolute one. By the latter term the author means a diet of meat and fat, with the strictest possible exclusion of carbohydrates. The difficulty is to decide in which cases of diabetes and at what periods carbohydrates must be entirely excluded, or where in moderate and strictly measured quantities they may be allowed. Herein lies the skill of the physician in the

successful treatment of diabetes. Dr. Kleen's directions will well repay study, and we can recommend this volume to those who seek information on all matters connected with glycosuria and diabetes.

New Inventions.

DRILL FOR MASTOID CASES.

MESSRS. MEYER and MELTZER have made for me a modified form of drill for mastoid cases shown in the annexed diagram. By the arrangement of toothed wheels I find it quite easy to rotate the burr at 1000 revolutions per minute. The length of the shaft and the shape of the handle enable one to give very accurate directing power and



pressure. The burrs fit into a square socket, so that different sizes may be used. While not to be compared, of course, with the dental engine, my drill will be found very useful where the engine is not available or, as in operations in the country, where it is difficult to take the engine with one. The whole length of the drill does not exceed 10 inches, so that it will go easily into the ordinary surgical bag. It is all metal and so can be made quite aseptic.

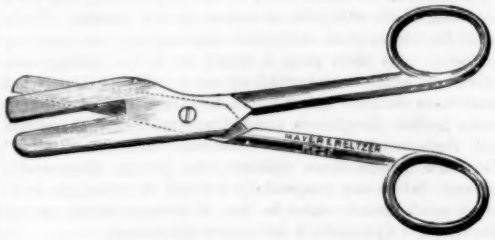
Scarborough. SIDNEY H. SNELL, M.D., B.S. Lond.

ASEPTIC SURGICAL DRESSINGS.

THE feature of some new sterilised dressings which we have received from Messrs. Robinson and Son, Limited, of Wheat Bridge Mills, Chesterfield, and of 55, Fann-street, London, E.C., is the method by which they are packed for surgeons' use in operation. The dressings are sterilised by steam and packed in cases all sterilised in the following manner. The dressings are cut and folded to the size required and then inclosed in the patent container which consists of an inner wrapper of parchment paper. Outside this is a wrapper of grey waterproof wool and outside this, again, is an outer wrapper of glazed paper. The whole is sterilised by means of steam under pressure. In order to avoid the contents getting moist the apparatus with the dressings inclosed is heated, after shutting off the steam, in a vacuum. The packets are then taken out and sealed under strict aseptic precautions. This step of obviating the appropriation of moisture during the process of sterilisation by steam is of course important, as all surgical dressings are much more effective when used quite dry. We have received two typical samples of cases thus prepared, but amongst the series provided by this firm are an amputation set large and small, a breast cases set, an excision of glands set, a minor operation set, a skin-grafting set, a hernia set, a trephining and mastoid set, and an abdominal section set. Most of these comprise, of course, absorbent sponges, absorbent wool, gauze, and bandages. This method of packing aseptic dressings is fully in accordance with surgical requirements.

NEW FRÆNUM SCISSORS.

THESE scissors, which I have designed and which Messrs. Mayer and Meltzer have kindly made for me, consist of upper and lower blades. The upper one is fashioned in the ordinary way; the lower blade is much broader and is divided nearly up to the pivot-joint into two portions, with a slight interval between them. The left portion, together with the



right, form a director and guide, whilst the right portion alone opposes the upper blade and forms the cutting surface. By this means the operation of severing the frænum linguæ can be performed with one hand, whilst there is no danger of wounding the lingual vessels.

E. R. HAINES CORY, M.R.C.S. Eng., L.R.C.P. Lond.
Bournemouth.

THE "CLARATMOS" PATENT VENTILATING SCREEN.

THIS screen effects two things: firstly, it filters the air, and, secondly, it disperses a draught so that the current of incoming air is diffused and no unpleasant cold currents are experienced. It consists simply of a frame containing two sheets of metal gauze of a certain mesh which is easily attached to the ordinary window fittings. Between the pieces of metal gauze is placed, also, a gauze of fabric like Gamgee tissue. If desired this may be impregnated with some antiseptic. In order to place the screen in position the lower sash is raised and the frame is introduced into the grooves provided for the upper sash. The screen is secured by means of wedges at each end. The window can be opened or closed as usual by gently pressing the sash past the rubber flange provided. The screen is so devised as not to interfere with the free passage of incoming air, whilst it filters it from suspended impurities, as is evident from the accumulation of dirt upon it. Again, the screen acts as a resistance and thus prevents a draught. The patentees are Messrs. F. W. Warren and Co., of 340, Harrow-road, London, W.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 24, 1900.

THE Local Government Board recently issued a new General Order on workhouse regulation with special reference to dietaries to take effect from and after March 25th, 1901, or, at the option of the guardians, from and after Dec. 25th, 1900. The Order is worth the close attention of all our readers. Dietaries are difficult things to devise where large numbers are concerned and where economy is a consideration, and the dietaries in the schedules of this Order must be tested ultimately by experience. But it seems not premature to say that the Order and the circular accompanying it show that the Local Government Board have taken into due consideration all the points involved in the fitting solution of such a problem as the proper feeding of the poor in workhouses, whether able-bodied or otherwise. The Board have, of course, acted under the advice of a committee appointed for the purpose and of their medical inspectors, Dr. A. H. DOWNES and Mr. A. FULLER.

The first points in devising such dietaries is the sufficiency of any dietary to meet the necessities of nutrition of the inmates, and the provision of sufficient variety in it from day to day. If there may not be luxury in workhouse fare there is at any rate no excuse for a sickening uniformity to intensify the monotony of existence in workhouse conditions. To judge from the experiences of inmates of public institutions generally there seems to be extraordinary difficulty in giving interest and variety to meals. We suspect that this often arises from apathy or want of imagination or liberality in those who have to provide the food. It is, at any rate so far as the complaint is well founded, inexcusable, for the greater the number that have to be provided for the easier it should be to provide cheaply or reasonably a sufficient variety of good food. The next point is that there shall be no waste. The fourth point is that the medical officer shall have a general authority over the dietaries and a special one in favour of several classes which naturally fall to be protected by him, notably the sick, the very young, the insane, the feeble, the pregnant, and also those unfortunate individuals who have idiosyncrasies of appetite and to whom the ordinary fare is unsuited. Finally, there is that great question in diet—the use of alcohol. These are the principal points to be faced in any Government regulation of workhouse dietaries, and they have been met in the new Order and disposed of in a way fair to the poor and to those at whose expense the poor are fed; the discretion of the medical officer in regard to the dietary of his patients has been practically uninterfered with.

While there is no justification in a workhouse for excess or for luxuries there is no reason why the food should not be pleasant and acceptable and sufficient. We think that this is provided for in the dietary of the able-bodied and in that of the sick also in the new Order. Medical men and experienced matrons who have knowledge of the food-supply of their own houses would say that the rations and the ingredients of the rations are satisfactory and are certainly superior to anything that the class of persons usually found in a workhouse would be able to command at home. In the breakfast and supper rations of a plain diet for able-bodied men and women, whether at work or not at work—of which 11 varieties are given—it is specially provided that the rations are to be so selected that the breakfast and supper shall not be alike on any one day. For an able-bodied inmate at work an additional meal in the form of lunch is provided. It seems to us to be a defect that in the breakfast of the able-bodied no coffee, tea, or cocoa is provided. A very large proportion of the inmates of workhouses are reluctantly obliged to do without alcohol and it seems to us a little severe that they should not be provided with the nearest substitute in the shape of non-alcoholic stimulants. On Sundays only, with bread-and-butter, or margarine, a pint of tea or coffee is provided. In the corresponding meals for children the liberal proportion of milk in coffee, tea, or cocoa is a good feature. The list of rations for dinner in the plain diets for able-bodied men and women, whether at work or not at work, contains no less than 39 varieties. It includes dinners of roast or boiled beef, mutton, and pork with bread and vegetables; boiled beef with suet pudding, bread, potatoes, and other vegetables; tinned meat, bacon, hashed meat, fish, soup, Irish stew, hotch-potch, meat pie, and potato pie. The large range of possible menus thus suggested gives a pleasant impression of thoughtfulness in those who have constructed the formulæ. And this impression is confirmed by a study of the various dinners, 24 or 25 in all, supplied to the infirmaries. Here the meat course is supplemented by 13 puddings, roley-poley, golden pudding, bread pudding, batter pudding, and the like, names which suggest the disposition to supply the infirm with convenient and even enticing food. The dietaries for children are equally satisfactory. In this connexion it is to be noted that children are not to be served slavishly by weight but according to their appetite, and that in regard to children under three years of age and in infirmaries or sick wards the medical officer has authority to empower the nurse to make modifications.

One of the most important points in the dietary of workhouses is the use of alcohol by the inmates. The authority of the medical officer with regard to all questions arising here has to be defined. The matter is carefully handled in the General Order and on the whole is dealt with in a way of which the profession cannot complain. The classes which go to make up a workhouse population are much addicted to the abuse of alcohol and the habitual use of it in workhouses is now discontinued. Article VIII. of the Order says that the guardians shall not allow to any inmate any fermented or spirituous liquors unless in pursuance of a written recommendation of the medical officer for the workhouse, to be entered in a book termed "the alcohol book" and to be accompanied by a statement of his reasons for such recommendation. We approve of this regulation the more entirely because the next paragraph of the article maintains intact the absolute discretion of the

medical officer in respect of the prescription of alcohol for the sick, while other articles give a large power to him to vary the diet of inmates of the workhouse temporarily for sufficient reasons. Some intemperate teetotalers would wrest from the medical man the power of prescribing alcohol even for the sick; but such views receive no sanction from ordinary sensible people. We see in Article VIII. a proper recognition of the exceptional place of alcohol in diet and therapeutics. This it is which throws a great responsibility on those who prescribe it.

To speak generally, the thoughtfulness shown in preparation of the new General Order is obvious. It finds a further illustration in Article V., which empowers the master of a workhouse when satisfied that the inmate, though not ill enough to need medical attendance, is unable to take the ordinary ration to order him a lighter meal, the occurrence to be reported to the medical officer at the next visit for his confirmation and comments. We have nothing but approval for the constantly reiterated instructions in this Order against waste. The food that is not consumed after any given meal has to be kept for early future use, while daily and weekly accounts by the master of the workhouse relating to provisions issued from, and returned to, the stores have to be prepared. The master is also to keep a careful record of the diets ordered by the medical officer under Article VII. in the special cases already enumerated. The General Order, in fact, emphasises the responsibility of the medical officer in the matter of dietaries. It imposes on him the duty of advising the guardians in the adoption of the tables of ordinary diet as well as the duty of giving special heed to the diet of the sick and the young.

THE autumn session of the General Medical Council will commence on Tuesday next, Nov. 27th, at 2 P.M. There will be several differences in the *personnel* of the Council. Changes have taken place in the representation of the Victoria University and of the Royal College of Surgeons in Ireland. The late Dr. D. J. LEECH, a most valuable member of the Council, is now replaced by Professor A. H. YOUNG, and Sir PHILIP SMYLY yields his seat to Dr. C. B. BALL. The absence of Sir PHILIP SMYLY at the time when questions in which he was personally interested, deeply involving the interests of the Branch Council of Ireland, have to be discussed, is unfortunate. But the most startling novelty in the composition of the Council will be the appearance at its deliberations of a representative of a new University, one which has not yet any medical graduates and which can only have them for five years by retrospective action. The situation must appear to many open to criticism, but it is not likely to be the subject of any serious discussion at the Council table. There will be some indirect advantages in the presence *ab initio* of a representative of the University of Birmingham. He will become the sooner acquainted with the educational views of the Council and with its general business, and will be the readier to introduce into the Council's methods that energy and practical spirit which, when kept within bounds, we all admire in the Midland metropolis.

It is possible that the session may be a short one compared with its immediate predecessors, both of which have extended over eight days. A vigorous effort should be made by the Council to curtail its proceedings. It would gain credit by greater dispatch in the conduct of business and would save money—an object which for urgent reasons should be kept in the front. Without attempting to mention all the subjects which must engage the attention of the Council we can form a pretty fair estimate of the principal of these. Three or four matters will certainly call for careful handling. They have already occupied much of the time of the Council and should be disposed of in such a way as not to be troublesome again. One of these matters is the dispute between the Royal College of Physicians of London and the Royal College of Surgeons of England on the one part and the Council on the other, touching the registration of medical students and the recognition of science teaching. The teaching given in certain schools is recognised as being up to the standard required for the medical curriculum by the Colleges but not by the General Medical Council which does not regard the schools as being universities, or schools of medicine, or scientific institutions. There is something to be said on both sides, but the dispute has lasted too long and should be closed. It is the perpetual carrying over of contentious business from session to session that is responsible for so much waste of time and money. At the last meeting of the Council the President, acting on the suggestion of the Education Committee, undertook to get an opinion from Mr. MUIR MACKENZIE on the legal points raised. It is a pity that such guidance was not obtained at the outset, but it is understood that Mr. MUIR MACKENZIE'S opinion has now been received and the Council will doubtless be guided by it as to any further controversy with the Colleges. The Colleges are very tenacious of what they believe to be their rights, but they will be more likely to be influenced by the Council if it acts strictly within the lines of its legal powers.

The most important subject to be considered by the Council at its approaching meeting is its own financial position, which last session was referred for further investigation to a special committee. The report of this committee cannot fail to be of much interest, for the particulars of the exact financial position of the Council at the present moment will there be given. The figures cannot differ materially from those contained in the last report of the Financial Committee in June, which showed the tendency of the expenditure of the Council to grow, while its income for the moment tended to diminish. The excess of expenditure over income, which amounts on the average of the last seven years to £677 a year, is easily explained. The range of work done by the Council has largely increased; the sessions have grown longer; every committee makes its reports and expects them to be published; the inspection of the examinations of the Apothecaries' Hall of Ireland has been costly; the premises of the Council have been enlarged and a sinking fund has been established for the extinction of the debt. Much legitimate progress is implied in most of these items of expense. But it is unsatisfactory that the capital of the Council should be drawn on to the extent of over £600 a year and some scheme of economy must be devised. The impecunious condition of the Irish Branch Council is very unsatisfactory and the dole of it from the General Medical Council for temporary relief

is more so. The Irish Branch Council should cut its coat according to its cloth, as the English and the Scotch Branch Councils do, and contrive to have a balance on the right side. It may, however, be necessary to bring the Branch Councils under a common and central financial arrangement.

DR. JOHN CLARK of Cleator Moor, Cumberland, has written to us on the subject of additional fees for adjourned inquests alluded to in our second leading article of Nov. 3rd. He reminds us of a letter which he published in THE LANCET of Feb. 12th, 1898, p. 480, signed "M.D.," to which, and to our reply to it, he refers us. Briefly the facts are these. On Jan. 28th, 1898, Dr. CLARK was asked to attend a coroner's inquest on the body of a woman who died under peculiar circumstances; he attended and gave his evidence, but the jury not being satisfied unanimously demanded a post-mortem examination, which Dr. CLARK duly made after receiving formal request from the coroner to do so and to give evidence thereon. On the coroner paying the usual fees of two guineas, one for making the post-mortem examination and one for giving evidence, Dr. CLARK claimed three guineas, basing his claim on the statement in Wellcome's Medical Diary (1898), page 211. He considered himself entitled to one guinea for attending the inquest in the first instance and giving evidence and to two guineas in addition for making the necropsy and giving evidence thereon. The coroner declined to pay more than two guineas, which Dr. CLARK accepted without prejudice, telling the coroner that he (Dr. CLARK) would look further into the matter. In reply to the question as to whether he was entitled to three guineas we felt obliged to reply in the negative and to express our belief that the coroner was right. We now learn from him that he subsequently succeeded in getting the extra guinea on applying to the county council, who decided in his favour. But as the coroner pointed out, "the Act is not without doubt," and he required a promise from Dr. CLARK that he would return the fee should the auditor surcharge him. Subsequently he received an order from the same coroner to make a post-mortem examination and to attend to give evidence. He did so; the inquest was adjourned and he was required to attend again, being detained six hours. He again claimed an extra fee from the county council, but this time without success. On applying, however, to the Home Office he received a reply that his letter would be attended to, and after the lapse of a few months he received a cheque from the coroner for one guinea. He also informs us that another practitioner in his neighbourhood was equally successful. Dr. CLARK truly observes that we are unaware of such extra fees having been paid to medical men and he justly considers that the profession ought to know of such demands and concessions. While perfectly agreeing with him and giving him and his friend, as our readers will, every credit for the stand which they successfully made, we must remark that the county councillors were exceptionally generous in the first instance. Why did they not repeat this generosity in the second case? It is more than probable that they had discovered that the Coroners Act of 1887 allows a fee of two guineas only, and that their functions as county councillors were limited to being just rather than generous. The Home Secretary is in a different position, he having power to order additional or special fees to medical witnesses. But would many medical men undergo such worry and such delay for a claim even when they considered it just? We think it preferable to get the Act amended.

The section of the Coroners Act, 1887, which fixes the amount of fees is as follows: A legally qualified medical practitioner who has attended at a coroner's inquest in obedience to a summons of the coroner under this Act shall be entitled to receive such remuneration as follows: that is to say, (*a*) for attending to give evidence at any inquest whereat no post-mortem examination has been made by such practitioner, one guinea, and (*b*) for making a post-mortem examination of the body of the deceased with or without an analysis of the contents of the stomach or intestines and for attending to give evidence thereon, two guineas. It is perfectly clear that the coroner possesses no power whatever to pay any fee for a second attendance upon an adjourned inquest, and, knowing this, the general practice of coroners in cases of murder, manslaughter, and others, where an adjournment is inevitable, is to take evidence of identification of the body only at the opening of the inquest, the medical witness not attending till the adjournment. In a large proportion of adjourned inquests one attendance only is required; but it not unfrequently happens when there are many witnesses that a second or even third adjournment becomes necessary, and as the evidence of the medical witness is always taken last he must be present at the end. We have already condemned the half-guinea police-court fee as a paltry one to offer to a professional gentleman, and the same remark applies to the coroner's court. Sir MATTHEW WHITE RIDLEY having resigned the office of Home Secretary he has been succeeded by the Right Hon. C. T. RITCHIE, to whom we hope an earnest and successful application will be made for a revisal of fees to medical witnesses in all courts of law.

Annotations.

"Ne quid nimis."

THE ANNUAL MEETING OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

IT cannot be said that the proceedings at the annual meetings of the Royal College of Surgeons of England are remarkable either for interest or importance. The only motion of any real moment at the last meeting was that in which an appeal was made to the Council to confer representation on the Members. With this appeal we need hardly say that we cordially agree, for we have ever maintained that the Member of the College has an inherent moral right to a share in the government of the corporation of which he is a part, although by the Charter of 1842 he was deprived of the franchise. The motion was carried without a dissentient vote, but if we may judge by precedent it will be of no effect. At present the real obstacle to any further progress in this direction is the adverse vote recorded by the Fellows in 1896. The time has now, however, arrived when another

attempt may reasonably be made to ascertain the opinion of the Fellows on this matter. On the previous occasion when the Fellows were consulted answers were received from only half of the whole body, but a large proportion of these were in favour of the adoption of some mode by which the Members should be represented on the Council. We would suggest that when the Council again ask the opinion of the Fellows, a moderate and reasonable scheme of representation of the Members should be sent round to the Fellows. There can be little doubt that some of the Fellows fear that in any new charter their interests would be likely to be utterly swamped by the very much larger body of Members. If it were made quite clear to them that all that the Members claim is a reasonable share in their own government, we think that these apprehensions would be allayed, and it would be found that a majority of the Fellows are in favour of the Members being represented on the Council. The Members may look with hope on the advent of a new century; never before have so many Fellows and so many members of the Council been in favour of their claims. We have always said that representation of the Members on the Council would be sure to come and it cannot now, we think, be far distant. Another resolution asked that the Members might have sent to them without any application a copy of the report of the Council. It is not in itself an unreasonable request, but the expense is a great bar to carrying out this suggestion, for this would amount to at least £80, even if the report were printed on thin paper so that it might go through the post for ½d. The method adopted by Convocation of the University of London is simple and inexpensive. Any member of that body who attends one of the meetings, or who applies to the secretary, receives the reports for two years. If some such plan were adopted the expense would not be great, and if it were made to apply to the Fellows as well as to the Members the total cost might be even less than it is now. A motion at the meeting dealt with the necessity for a medical reform Bill, and no one who has studied with any degree of attention the working of the present Medical Acts can doubt the need for reform. As was pointed out by several of the speakers an unregistered person has a decided advantage over those who are registered in the practice of medicine. It is, however, less easy to indicate the body which should initiate the movement to obtain reform. We must confess that the General Medical Council appears to us to be the most suitable body for this purpose, but it is not very probable that it will undertake spontaneously so arduous a task; and we agree with Dr Danford Thomas, the seconder of the resolution, that the College would be performing a valuable public service if it were to act in this matter. The deficiencies of the present law are so manifest that it seems almost impossible that they should be allowed to continue much longer. The resolution dealing with the question of union with the Society of Apothecaries for examination purposes, and the question of the method of registration of institutions for the teaching of preliminary science subjects, does not seem to us to have been brought forward with judgment. The former question is not timely in view of the reorganisation of the University of London, and the latter is a very difficult subject in regard to which the action of the Royal Colleges is perhaps open to misconstruction. On the whole the tone of the meeting was harmonious, but unfortunately one or two speakers cared more to score off the Council than to promote the true reform of the Royal College of Surgeons of England.

THE ILLNESS OF THE CZAR.

WORLD-WIDE regret has been expressed at the news that His Imperial Majesty the Czar has been stricken down by an attack of enteric fever. The attack was first thought to be one of influenza and the bulletins announced that the Imperial patient was so far recovered that no further official reports would be issued. On Nov. 12th, however, the disease assumed the character of enteric fever. Fortunately, the attack appears so far to be a mild one, according to the bulletins which have been made public. Indeed, judging from the temperature and pulse-rate, a physician would hesitate to make such a diagnosis. The evening temperature ranges from about 101° F. to a little above 102° F., whilst in the morning only a little above 100° F. has usually been registered; the pulse has varied between 70 and 80 per minute. Such a range of temperature and rate of pulse do not negative a diagnosis of enteric fever, although such conditions are rare, but in this instance they would seem to point to a light attack, and it is sincerely to be hoped that convalescence will soon be established.

INDIA FROM THE POINT OF VIEW OF A GERMAN MEDICAL MAN.

DR. PLEHN, who is a medical officer serving under the German Colonial department at Tanga in Western Africa, having recently carried out a tour of inspection through British India, including Ceylon, has published an account of his journey in the *Archiv für Schiffs und Tropen-Hygiene*, vol. iii., 1899. Starting from Naples towards the end of 1898 the traveller and his companion, an architect named Gurlitt, arrived at Colombo on Nov. 23rd, and after visiting amongst others the following places—Kandy, Newera-Ellia, Tutticorin, Madura, Trichinopoly, Tanjore, Pondicherry, Madras, Hyderabad, Beejapoor, Khandalla, Matheran, Bombay, Allahabad, Calcutta, the Terai, Darjeeling, Benares, Lucknow, Agra, Delhi, and Jeypoor—finally quitted India on Feb. 23rd, 1899, having thus devoted exactly three months to his self-imposed task. A tropical climate, according to Dr. Plehn, exercises only a feeble influence upon the physiological functions of Europeans who ought therefore to refrain from modifying their customary diet. They should, however, wear white flannel clothing with cork helmets and by no means should act upon the erroneous idea that physical exercise is injurious. The example of the English should be followed who devote themselves to every kind of sport with the utmost benefit to their health. In all the principal towns of India as well as in most of those of secondary importance there are well-constructed hospitals under European medical men, and in many of the smaller towns and villages dispensaries have been established and have been placed in charge of native medical graduates. Every post-office also is supplied with the more commonly used medicines, such as quinine and calomel, which are retailed at moderate prices. All mortuaries are fitted with wire blinds in order to keep out flies and to prevent the dissemination of infectious matter. Sanatoria are very plentiful throughout India, not only for the advantage of private persons, but also for that of State employés and soldiers. They are situated on elevated sites and contain numerous schools conducted by competent professors. The towns which Dr. Plehn visited are all provided with an efficient water-supply, but the majority of the population still prefers to fetch its water from rivers or ponds. The public markets are remarkable for their cleanliness, but in the native quarters scavenging still leaves much to be desired. In spite of all efforts to the contrary on the part of the authorities the natives elect to live in narrow, ill-ventilated lanes, destitute of all proper lighting, and either swimming in mud or else choked with dust, according to season. Filth is removed every morning in carts, being utilised as manure when not disposed of in the sea, as at Calcutta. "The education of medical men employed in India," says Dr. Plehn, "as well as that of English medical men in general,

is, in my opinion, very unequal, inasmuch as the establishments where it is acquired are mostly maintained by private enterprise. The State exercises only a limited supervision over the examinations, while the amount of knowledge demanded in the different schools varies considerably. Medical men possessing sound general knowledge are consequently less numerous than clever specialists." The medical faculties of Colombo, Madras, Bombay, and Calcutta are richly endowed and well supplied with collections, libraries, and laboratories; but bacteriology is treated like a step-child. In the whole of India there is not a single bacteriological institute worthy of the name. Consequently the pathology of infectious maladies is at a very low level; the diagnosis "fevers' includes all sorts of diseases. Thanks to Lady Dufferin, "lady doctors" are becoming every year more and more numerous in India; and special hospitals for females only, with entirely feminine staffs, are being established to satisfy the prejudices of the natives, social and religious. After fulfilling a four years' curriculum a great many natives, Hindus, Mussulmans, and Parsees, are admitted into a class of practitioners known as hospital assistants. "But in general during the late epidemic," says Dr. Plehn, "they showed themselves sadly wanting in initiative by reason of their defective morale." Notwithstanding this damaging criticism Dr. Plehn proposes the immediate employment by his Government of a corps of hospital assistants for service in German East Africa. For the "lady nurses" in India Dr. Plehn has nothing but unqualified praise. Their honesty, their reserve, and their absolute devotion impressed him most strongly; and he is quite convinced that as sick attendants in hot climates there is nothing to equal them. There are several other matters of interest upon which Dr. Plehn enlarges and he has naturally a good deal to say about the plague. With regard to the latter his opinion is that owing to the concealment of slight cases the official mortality is far too high and the morbidity far too low. He thinks that the difficulty of stamping out an epidemic under such circumstances must be enormous. Dr. Plehn is to be congratulated on having produced an interesting narrative, remarkable alike for its exhaustiveness and its impartiality.

A DROP OF OPIATE FOR THE BABY.

AN inquest was held recently upon the body of an infant, the child of a labourer at Southminster, at which evidence was given to the effect that on the evening of the day upon which the mother was confined the newly-born child was "restless"—a not uncommon circumstance with infants—and that a neighbour, apparently at the mother's request, administered to the child an unknown quantity, defined by her as a few drops, of the anodyne medicine prescribed by the medical man in attendance for the use of the mother, who was in considerable pain. From the evidence given by the neighbour in question and the father of the child it further appeared that the administering to "restless" infants of opiates, which happen at the time of confinement to be conveniently at hand, is by no means uncommon; indeed, it seemed to be regarded by them as a natural and perfectly harmless means of securing tranquillity. That in the district in question, at all events, it amounted to a customary practice appeared also from the evidence of Mr. R. G. Coombe, the medical man who had attended the mother. It seems to have been unknown to him before the occurrence that formed the subject of the inquiry, but he had evidently been at some trouble to inform himself with regard to it, and the coroner and he alike were emphatic in denouncing it as dangerous in the highest degree. Guided by the coroner, who pointed out that there was no evidence that anyone intended to injure the child, the jury returned a verdict of "Death from misadventure," adding a quaint rider to their verdict (which was received by the public with applause) to the effect that the mother, from what they knew of her, was not likely to have administered the opium intentionally, as she was a good mother to her children. This we cannot gainsay; but good mother or not, she may be reckoned as a fortunate one, while her friend is also to be congratulated. To have administered poison intentionally, thereby killing the child, would have brought the person responsible perilously near to the crime of murder, but that which constitutes murder when done of malice prepense, when it is found to arise from culpable negligence, constitutes manslaughter. The ignorance of the persons in the case before us, or their good character, may have entitled them to profit by the verdict found, but it must be borne in mind in considering similar cases that mothers to whom anodynes are administered know the purpose for which they take the medicine and its effect upon themselves, and that if, knowing this, they infer that "a few drops" will have a quieting effect upon their children they must almost necessarily be taken to have enough intelligence to know that it is possible to give a dangerous overdose. It is certainly also desirable that the medical man who prescribes an opiate for the mother after her confinement should warn those about her not to administer even the smallest quantity of it to the infant, and should further see that there will be as little as possible of it about the house to act as a temptation to the reckless or the ignorant.

THE NEW RIVER COMPANY AND THE CITY OF LONDON.

THE *Times* of Nov. 9th contains a letter from a correspondent who complains that at a part of the city in which the rents are the highest the inhabitants suffer from the insufficiency in the amount of water which is supplied to them. "In several large wash-houses and factories," he writes, "it would be impossible to suppress an outbreak of fire late in the afternoon owing to the emptiness of the cisterns. This seems to be a matter," he concludes, "which demands immediate attention." We are not aware that of late any public complaint has been made in regard to the quantity of water supplied by the New River Company, although it has been a matter of frequent remark that the amount paid for the water has been excessive, and it has even been averred that in many cases the price has equalled that which would be paid for an equal amount of beer. If the *Times* correspondent is right in suggesting that a constant water service is not given throughout the City and that the cisterns are not kept full by reason of insufficient pressure in the mains the deficiency should be made good forthwith. The *Times* of Nov. 10th also contained a letter from a "well-informed correspondent" explaining the "attitude" of the New River Company in relation to constant water-supply. "The company," he said, "have at all times immediately responded to an application for constant supply coming from any of the public authorities empowered by statute to require a change in the mode of supply, subject, of course, to the provision of proper house-fittings." Formerly, we may point out, the expense entailed in the alteration of the internal fittings, which falls on the landlord or on the tenant of the house, was often considered a grievance by the person who had to pay for it. In view of possible accidents to internal fittings, the *Times* correspondent insists that the provision of proper house-fittings is particularly important in the City, because the houses are often stored with valuable goods. The New River Company, he says, acting under, and in coöperation with, the City Corporation, are extending constant supply in the City "taking the area section by section." More than 50 years have passed since Sir John Simon reported to the Corporation in favour of a constant water service, and it is certainly time

that it should be given throughout the whole of the City. We are glad, however, to note that the correspondent of the *Times* asserts that "in all the streets and public ways of the City the New River Company have constantly charged mains to which at short intervals the public fire hydrants are fixed." The statement would have been even more satisfactory had it been directly given by the New River Company. A small part of the City is supplied by the East London Waterworks Company and if, as it is asserted (by the correspondent of the *Times*), the New River Company supply water for fire extinction in the area supplied by the East London Company they deserve the thanks of the citizens who dwell there. Is it possible that the *Times* correspondent was mistaken in this particular?

FIGHTING AGAINST TUBERCULOSIS.

THE French Society of Preservation against Tuberculosis caused handbills to be distributed at the doors of the Paris Exhibition. In these handbills it is stated that in the course of the year 150,000 persons died from tuberculosis in France. The loss due to this disease alone is therefore equal to all the inhabitants of such a town as Toulouse. More than plague or cholera, more than all the epidemic diseases put together, is tuberculosis fatal to the population. Then advice is given as to the prophylactic measures that should be taken, and the handbill urges that spittoons should be placed everywhere—in factories, workshops, offices, shops, barracks, hotel rooms, theatres, schools, railway stations, and the like—and that those who are obliged to expectorate constantly should carry pocket spittoons with them. This advice is being adopted to some extent. In the Paris omnibuses and other places of public resort there are notices requesting the passengers not to spit on the floor and the number of spittoons at the disposal of the public is daily increasing.

THE HARVEIAN LECTURES OF THE HARVEIAN SOCIETY.

THE series of three Harveian Lectures delivered by Dr. Robert Maguire will be published in full in THE LANCET. Without anticipating what our readers will find in the full account (delayed in publication by the advancement of date of the lectures) we may at once call attention to the matter of the third lecture, which deals especially with the Treatment of Pulmonary Tuberculosis. Dr. Maguire gave an account of the experiments which he had made upon animals and upon himself as to the effects of remedies administered intravenously. The pulmonary circulation lends itself, as he showed, to the treatment of this disorder, for whatever can be injected into the veins must first find its course through the lungs by way of the pulmonary artery. Therefore remedies which might be injected by this method would have a more pronounced effect upon the lungs than those administered by the skin, by the mouth, by inhalation, or by direct injection into the tissues of the lungs, as Dr. Maguire discussed. The dilution of the remedies as administered by such previous methods must be obvious. But it is not easy to find a germicide, of whatever nature, which can be safely injected into the veins and in such strength as to be fatal to the germs contained in the lungs. Dr. Maguire tried cyanide of mercury and potassic iodide of mercury, but with no good results. He also tried solutions of diastase and of nuclein, but with no result which would encourage further procedure. At last, however, he attempted the use of tricresol and finally of formic aldehyde. The latter re-agent he first used in a strength of 1 in 250,000, but after repeated trials found that he could use it in a strength of 1 in 2000, and by special apparatus could inject with safety 50 cubic centimetres of this solution daily. The technique requires care. Dr. Maguire had calculated the strength of the solution which would reach the lungs, on such a solution being injected into the veins, and showed that it was likely to be an efficient germicide. He had found on his own person that greater strength of solution, or a greater amount of the solution named, was dangerous. He described the effects of such injections, as practised by himself and others on some 70 patients, and mentioned that the patients so treated had greatly improved, and that many of them had shown disappearance of tubercle bacilli from the sputum. One of such patients, apparently cured, was brought before the meeting of the society at which the lecture was delivered. Also Dr. Maguire said that similarly good results had been obtained in putrid bronchiectasis and the treatment was likely to be of use in acute pneumonia.

THE BATTLE OF THE CLUBS: A SUCCESSFUL PRECEDENT.

THE medical men of Eastbourne were among the first to show the practicability of organising the profession so as to secure effective action against companies catering for medical work and employing canvassing and other objectionable methods. It is satisfactory to know, from the report read at the fifth annual meeting, that after five years the profession is still loyal to itself and is making a successful resistance through the Eastbourne Provident Medical Association to low forms of medical service. Much of the credit of this state of matters is due to Dr. Alexander Harper. He is honorary secretary to the association and is not himself on the working medical staff. The association is now worked with one collector and otherwise expenses are being reduced. The thorny question of wage-limit is not disposed of on any hard-and-fast line, but is left to the absolute discretion of the committee which by the rules must contain two or more representatives of the Eastbourne Medical Society. Practically the unanimity of the profession at Eastbourne is complete and there is a good prospect of their being able to solve the problems connected with medical attendance on the working-classes so as to give little chance to stray companies of the commercial sort and their medical agents.

THE HOUSING OF THE POOR IN LONDON.

THE amendments passed on August 8th last on the Housing of the Working Classes Act of 1890 are so feeble that this important question cannot remain as it is. The recent outbreaks of Hooliganism clearly indicate the development in our midst of a semi-savage population which is a serious menace to the peaceful and lawful citizen. From the social, the political, the military, as well as from the sanitary point of view every endeavour must be made to check the growth of a degenerate and degraded population. The medical officer of the London County Council, Mr. Shirley Murphy, has put the facts plainly before us. Some 400,000 Londoners are living to-day in one-room tenements. Of these 9000 are living seven in one room and 3000 eight in one room. As many as 17 persons have been found in one room, sometimes three in a bed and two under the bed. The death-rates in the different parts of London correspond with the overcrowding. In St. George's in the west where 10 per cent. of the population are overcrowded the death-rate is 13·2 per 1000; in St. George-in-the-East where 40 per cent. of the population are overcrowded the death-rate is 26·4 per 1000. Improvements have been effected to the advantage of the better class of workmen and of shop assistants and other sections of the community who were in no urgent need of such assistance, but the condition of the extreme poor is, if anything, even worse than it used to be. Mr. Steadman, as a representative of labour in the House of Commons, stated that the London County Council in 10 years had spent £2,000,000

to re-house 42,000 people. But he pointed out that Part I. of this scheme had cost £851,456, and "out of that sum no less than £282,405 had gone into the pockets of men who, instead of being compensated for their rotten property, should have been prosecuted." Then he inquired why butchers, milkmen, and others who sold unwholesome food should be punished while landlords who let unwholesome dwellings should be allowed to go free. But it is not so much the insanitary character of the dwellings as their overcrowding which does the mischief. The London County Council use the best material and construct substantial dwellings which will probably last from 200 to 300 years and they pay exorbitant compensation to the former owners, and all this very great outlay has to be refunded in 60 years. As a natural result they are obliged to charge high rents, and therefore their re-housing schemes do not bring any relief to the extreme poor. It is true that the new Amendment Act will now enable the London County Council to purchase land and to build houses outside the metropolitan boundaries. There the rents will be lower, but from this advantage must be deducted the cost of travelling and the loss of time which it involves. As a remedy Mr. Steadman proposed that the Government should give facilities for borrowing money at a cheaper rate of interest and that the repayment should be spread over a period of 100 instead of 60 years. But the great stumbling-block is the exaggerated compensation paid to the owners of slum property. Nothing is more profitable than the letting of houses to the extreme poor. The poorer the tenant the higher the rent he pays in proportion to the space which he occupies; but the fact that a large income is obtained by allowing the overcrowding of tenements is not a sufficient reason for paying to the owner a proportionate compensation. In any case the present state of affairs can only be allowed to continue at the peril of the community. As Lord Rosebery truly said: "There is not a close in the darkest quarters of Glasgow or a crofter's cabin in the Hebrides which is not a matter of imperial concern," and he added: "In the great cities, in the rookeries and the slums which still survive, an imperial race cannot be reared."

CHOLERA IN KOHAT.

LAST July a serious outbreak of cholera occurred among the native troops comprising the garrison of Kohat in the Punjab. This has formed the subject of a report by Major R. H. Firth, R.A.M.C., sanitary officer of the Rawal Pindi district. The first cases showed themselves on July 3rd, and from that day up to and including July 19th there were 314 cases and 151 deaths. By far the greater number, both of attacks and deaths, took place between July 3rd and July 13th, after which date the disease rapidly declined. Of the 314 cases 209 were in soldiers, either horse or foot, the remaining 105 cases being among followers. Of the 151 deaths 106 were of soldiers and 45 were of followers. This was the severest outbreak of cholera in any garrison of India which had occurred for many years and it presented three notable features—viz., (1) that although during the period under review there were some 60 Europeans resident in Kohat no single one of these was attacked by cholera; (2) that in one unit—the Punjab Garrison Battery—only one case occurred; and (3) that in another unit—the 19th Punjab Infantry—no less than 126 attacks with 56 deaths were reported. Major Firth and the medical officers of the garrison united in attributing the outbreak to choleraic pollution of the irrigation water which flows freely through Kohat. There was no reported case of cholera either in the city or district of Kohat before July 3rd, but it was well known that cholera existed all over the Punjab in June, and Kohat is the great centre to which the roads lead. The 19th Punjab Infantry suffered most heavily of all. This regiment arrived in Kohat on July 6th and camped on a grass farm near which irrigation water ran. They were free from cholera on arrival, but 26 cases with 11 deaths occurred on July 8th, and 61 cases with 18 deaths on July 9th. It was found that the men had consumed large quantities of the irrigation water. The removal of the corps to a camp away from all irrigation and to a water above suspicion rapidly checked the outbreak. The Punjab Garrison Battery used exclusively water from the fort well and escaped with only one case of cholera, a man who was known to have had close domestic relations with the city. Among the recommendations made by Major Firth with a view to the prevention of similar mishaps is one to the effect that British officers of native corps might show more energy than they do in disseminating ideas of personal hygiene among their men.

GENERAL HOSPITALS AND MENTAL DISEASES.

OUT-PATIENTS suffering from mental disorders have been for long treated at St. Thomas's Hospital and elsewhere. The results of experience have shown that good work has been done in relieving many sufferers and in avoiding the necessity for asylum care in not a few cases. The quarterly court of governors of the Newcastle Infirmary has decided to institute such a department, as reported by the *Newcastle Evening Chronicle* of Nov. 1st. Dr. G. H. Hume, in bringing forward the motion, pleaded for the fundamental ideas of prevention and cure, and it has been decided that a physician, qualified as the rules require and occupying an appointment in a public asylum in Northumberland or Durham, should attend at the infirmary one day in each week and prescribe for the out-patients placed under his care.

MEMORIAL TO THE LATE PROFESSOR JOSEPH COATS.

AT a meeting held in the Hall of the Faculty of Physicians and Surgeons of Glasgow on Feb. 7th, 1899, it was resolved to raise a memorial to the late Dr. Joseph Coats, who first occupied the position of professor of pathology in the University of Glasgow, and it was agreed that this memorial should take the form of an endowment connected with his name for the purpose of encouraging research in pathology. Intimation was sent to his colleagues, assistants, pupils, and friends that this opportunity was afforded of testifying to their appreciation of his character and services, and of at the same time forwarding the work to which so much of his life had been devoted. A fund has now been raised amounting to £1243 and the committee representing the subscribers have arranged with the University Court that the University of Glasgow shall found a scholarship therewith. This endowment will be known as the "Joseph Coats Memorial Scholarship in Pathology, founded by the friends of the late Professor Coats as a memorial of his distinguished services to pathological science, and in recognition of the ability and enthusiasm which he devoted to advance the teaching of the subject in Glasgow." The scholarship will be for the encouragement of original research in pathology and will be tenable for one year. It will be of the value of the free income of £1200 for the two preceding years and will be awarded biennially. Candidates must be graduates of medicine in the University of Glasgow of not more than three years' standing, and the scholarship will be awarded by the Senate on the results of a practical examination in pathology conducted in the beginning of October of every second year. The successful candidate must, for not less than six months following the award, pursue research in pathology in the Pathological Institute at the Western Infirmary or in a laboratory elsewhere approved of by the Faculty of Medicine, and shall not engage in medical or

surgical practice during this period. In accordance with the above conditions the sum of £1200 has been handed over to the University Court, and in accepting this sum the Court instructed its secretary "to tender to the donors the very cordial thanks of the University for the endowment they have so liberally provided, and to assure them of their keen appreciation of the interest they have manifested in the welfare of the University." There remains in the hands of the honorary treasurer, after the disbursements for printing, advertising, postage, and other small expenses, have been defrayed, the sum of £18 9s. 1d. With this sum the committee propose to purchase a brass tablet to be placed in the pathological rooms at the Western Infirmary.

THE SCHOOL BOARD ELECTION IN BRADFORD.

WE are glad to see that a medical man is standing as a candidate for the Bradford School Board and also that the medical man in question is Dr. T. W. Hime who was chosen to stand by a largely attended meeting of medical men as well as by a number of laymen. The presence of a medical man upon a School Board is very necessary to curb the zeal of fanatical "educationists" who look upon children merely as grant-earning machines, who fill them with smatterings of some five-and-twenty different kinds of knowledge instead of teaching a few subjects well, and who consider that if a child is well enough to be out of bed it is also well enough to go to school. Dr. Hime's remarks in his address upon over-pressure and the dangers of infection are excellent and we hope that he will be returned. Over-pressure and infection are the chief matters with which we are concerned as regards School Boards, for they affect the community at large. With regard to the relations between medical men and School Boards they are also of no small importance to us, and from time to time we have had to say very plainly what we thought upon the matter. Dr. Hime, too, has done good work for Bradford practitioners on the question of payment for certificates and the like, and we are sure that, whether elected or not, he will continue to do so; but if elected he would be in a more satisfactory position than if acting merely as a private citizen.

OPTIC NEURITIS IN MUMPS.

IN the October number of the *American Journal of Ophthalmology* is published a translation of a very important paper on this rare condition which was read at the Section of Ophthalmology at the Thirteenth International Medical Congress by Dr. H. Dor of Lyons. A man, aged 25 years, consulted him on Feb. 14th, 1900, for gradual loss of vision which began in April, 1899. In June optic atrophy was first diagnosed. Both optic nerves showed post-neuritic atrophy. Under the application of a constant current of five milliampères and injections of five milligrammes of strychnine vision improved and the patient could count the fingers at two and a half metres with the left eye and at one metre with the right eye. But no further improvement could be obtained. Formerly he was an excellent shot. The most careful investigation brought to light no other cause than an attack of mumps from which he had suffered in April, 1899, during his military service, and which confined him to hospital for 27 days. Optic neuritis in mumps appears to be well known to French military surgeons. Thus Surgeon-Major Hatry, who first described it, says[1]: "A soldier came to hospital on account of mumps of both parotid glands. He saw as if in a mist and the white *cornet* of the sister of charity appeared to him blue." The ophthalmoscope revealed changes which were afterwards seen in nine other cases of mumps—hyperæmia of the discs, dilatation of the vessels, and infiltration overing the papillæ. The prognosis in Surgeon-Major Hatry's cases was usually good and vision became normal in about two or at most three weeks. In the milder forms of optic neuritis vision was not much diminished, in the more severe forms it was, and the colour perception was altered.

[1] Mémoires de Médecine et Chirurgie Militaires, 1878, p. 305.

DOES AN ADVERTISEMENT CONSTITUTE A WARRANTY?

IN the Westminster County Court on Tuesday last, before Judge Lumley Smith, Messrs. Pulvermacher, Limited, electric belt makers, of Regent-street, W., brought an action for four guineas, the balance of the purchase money of an electric belt supplied to Mr. H. Mott of Oxford. Mr. Mott was led to write to Messrs. Pulvermacher by advertisement, and paid one guinea on account of a five-guinea belt described as "doubly concentrated." The belt in no way relieved his symptoms of migraine and irritability but rather, in his opinion, made him worse. So he returned it. Judge Lumley Smith held that the advertisement of their belt issued by Messrs. Pulvermacher was a warranty to cure "all the ills that flesh is heir to." As the defendant was not benefited by the belt he found in his favour, but did not give him costs. This is a judgment which may be of considerable importance. Many well-advertised quack remedies promise to heal everything. Can the public recover its money when it discovers as it always does, that the remedies are useless?

DIPHTHERIA IN CAMBRIDGE AND CHESTERTON: THE VALUE OF PREVENTIVE INOCULATIONS.

AN outbreak of diphtheria recently occurred in the above-mentioned districts which have a population of about 50,000. The first case was notified on Oct. 14th and the last up to the present time, on Nov. 15th, and in all there were 60 cases notified during the five weeks. Up to and including Oct. 24th there were 12 cases notified, out of which number four ended fatally. Nine of the cases occurred in children attending a higher grade school, two were members of the family of a scholar and one was a nurse in the hospital. The school was closed and on Oct. 24th Dr. B. Anningson, the medical officer of health, asked for the assistance of the Pathological School of the University. Professor Sims Woodhead was accordingly appointed consulting bacteriologist and Dr. L. F. Cobbett undertook the work of bacteriological examination and the duty of providing prophylactic injections of antitoxin where no medical man was in attendance. The method of procedure was as follows. The infants attending the school were visited in their own homes by a staff of willing helpers; a bacteriological examination was made, and a prophylactic injection of antitoxin was offered to all these. This was accepted in the majority of cases. An offer of antitoxin and bacteriological examination was put at the disposal of all medical practitioners for their poorer patients, and this was notified to them in a circular by the medical officer of health. Four cases, the first of which could be directly traced to the above mentioned school, having occurred in three other schools these were closed, and the children attending them and their young brothers and sisters were examined bacteriologically and offered a preventive injection. Circulars were sent to the superintendents of the Sunday-schools throughout the town, recommending the closure of their schools. A home was opened for those children in whose mouths suspicious bacilli had been found but who had shown no symptoms of the disease. To this home about 30 children who could not be satisfactorily isolated in their own homes were sent. Circulars were sent to parents whose children had suffered from diphtheria, pointing out how to aid in dealing with disinfection under the supervision of the medical officer of health. A

letter inclosing the circular just mentioned was sent to the medical practitioners asking them to keep their patients and suspects under supervision until three consecutive bacteriological examinations giving negative results had been carried out. Immediately following the preventive use of antitoxin and the commencement of bacteriological examinations there was an increase in the daily number of notifications, largely caused, no doubt, by the recognition of mild cases which might otherwise have escaped notification. The largest number of daily notifications (nine) was reached on Oct. 30th, after which date they fell rapidly, 10 cases only having been notified in November. The value of the preventive injections has been shown by the fact that only one slight case of diphtheria has occurred among those treated, many of whom were found to be harbouring the diphtheria bacillus at the time, while among the elder members of their families who had not been injected several cases occurred. No complaints of rashes or of other complications have been heard from the parents of the children who were injected.

THE CORONER AND THE DEATHS OF LUNATICS IN POOR-LAW INSTITUTIONS.

THE Local Government Board have issued an Order directing that within 48 hours after the death of a lunatic in any Poor-law institution notice of such death shall be sent by the superintending officer of the institution to the coroner of the district in which the institution is situated. The notice is to be accompanied by a statement signed by the medical officer, or the medical superintendent, or the medical man who attended the lunatic in his last illness, and containing certain prescribed particulars. The Order will come into operation from and after Dec. 1st, and it is in our opinion an excellent innovation, as tending to reassure the public in a very real and practical manner that everything that is possible is being done for a sadly afflicted class. We print it in full on p. 1528 of this issue, and congratulate the Coroners' Society upon the success of their efforts. A thousand lurid but unsupported tales, with an occasional case or two, like the terrible one of recent occurrence at Crumpsall, have bred in the public mind suspicion that the cause of death of lunatics in Poor-law institutions would not always bear scrutiny. The full publicity of a coroner's inquest will remove this suspicion.

THE SEXUAL LIFE AND THE OFFSPRING OF EPILEPTICS.

Dr. Bourneville and Dr. Poulard have published in the *Progrès Médical* of Sept. 29th the concluding part of a series of three articles dealing with the sexual life, marriage, and descendants of an epileptic, which presents in an interesting way an epitome of the question of hereditary transmission. The case which embodies the facts is that of a young man who began to have epileptic seizures in his thirtieth year. He was possessed of great sexual vigour and he married and begat several children. The epilepsy was of the idiopathic type and ran its usual course. At present the patient is intellectually weak and suffers from loss of memory and diminished sexual power. He begat eight children, two of whom died from athrepsia while a third died from intestinal catarrh (cholera infantum). A fourth child is alive and is the subject of convulsive attacks with twitchings of the eyes (*petit mal*) and violent outbreaks of temper. Another child has epileptic seizures (*haut mal*) and suffers from hallucinations of sight and disturbances of sleep. A sixth child is very nervous and has night-terrors. Thus of eight children six are the subject of grave neurotic troubles inherited from an epileptic father. Dr. Bourneville and Dr. Poulard discuss at some length the question of the marriage of epileptics and conclude that the marriages of those who are the subjects of epilepsy *petit mal* and *haut mal*) and epileptoid psychoses and neuroses (epileptic imbecility, epileptic insanity, and hystero-epilepsy) should be forbidden or strongly discouraged.

THE ASSOCIATION OF PORT SANITARY AUTHORITIES.

A MEETING of the Association of Port Sanitary Authorities will take place to-day (Friday) in the Guildhall at 10.30 A.M. The special business before the meeting will be to consider the recent reply to the association from the Local Government Board relating to the resolution passed at the last annual meeting *re* the notification of the existence of infectious diseases at foreign ports. Three discussions that promise to be interesting are announced. Mr. G. J. Woodman will open a discussion on the "Exemption of Government Vessels from the Provisions of the Public Health Act with Regard to Infectious Diseases." Mr. Councillor T. Clarke (Liverpool) will open a discussion on "The Precautionary Measures Adopted in Regard to Plague," when delegates will be invited to narrate briefly the measures adopted at their respective ports. Mr. Alderman T. Walton (Southampton) will open a discussion on "Port Sanitary Administration as it Exists, and the Further Powers Required."

FUNCTION OF THE PROSTATE GLAND.

IN the October number of the *Bulletin of the Johns Hopkins Hospital* Dr. George Walker of Baltimore describes a number of experiments which have led him to the conclusion that the function of the prostate gland is to furnish a fluid in which the spermatozoa can move freely. He found that there was no movement of the spermatozoa in semen from the testicle itself or from the globus major. Semen from the globus minor and vas deferens showed slight movement where the fluid was thin, but there was no movement in the portions of thick consistence which formed the bulk of the sample. On the other hand, in a mixture of prostatic juice and semen from the substance of the testicle there was distinct but not lively motion, while semen out of the epididymis with prostatic juice showed lively motion which continued unabated for some hours. Semen from the epididymis with normal salt solution also gave lively movement in the places where a mixture had occurred. In other areas where the liquid was thick no motility was apparent. For the continued motility more is necessary than the mere thinning, for in the salt solution all movement ceases after three hours, whereas in the prostatic juice it continues for over 20 hours.

CONVICTION OF AN ABORTIONIST.

ON Nov. 20th Ernestine Katz, a midwife, was tried at the Central Criminal Court, before Mr. Justice Darling, on a charge of having murdered a young woman named Kate Kennedy. The prisoner, a German, resided in Whitechapel, and it was alleged that on June 30th she performed an illegal operation upon the deceased by means of "an instrument." The case for the prosecution was that the deceased woman's death was occasioned by the operation which the prisoner was alleged to have performed upon her. Much legal interest was attached to the manner in which the depositions had been taken and a long argument ensued, but the main question for the jury was as to whether the prisoner was guilty of murder or of manslaughter, the facts of the case being perfectly simple. Mr. Arthur Hutton for the defence denied that the prisoner had performed an illegal operation, and he urged that what she did was for a perfectly lawful object. If, however, the jury did not take that view, he argued that they ought to find only a verdict of manslaughter. Mr. Justice

Darling directed the jury upon the law applicable to the case, and a verdict of "Manslaughter" was returned. It then appeared that when the prisoner was arrested a number of documents were found upon her which showed that in 1897, at Berlin, she was charged with an offence of this very same nature, and that she absconded from her bail to this country. Mr. Justice Darling is reported as saying that the jury had found the prisoner not guilty of murder but guilty of manslaughter, having been informed that that verdict was hardly possible if they were of opinion that she, in doing what they found that she had done, did not know that she was performing an act which was likely to have fatal results. In their opinion, apparently, the prisoner was an extraordinarily ignorant person in the practice of the business which she carried on. The judge plainly intimated that he did not share the opinion of the jury, and we entirely endorse his view. It would seem impossible that the prisoner did not know that she was performing an illegal, and possibly a dangerous, act. If a person knowingly inflicts an injury upon another a felonious act has been committed, and the assailant is liable for any result which may occur; if death ensues he or she can be tried for murder. In the case of Ernestine Katz we consider that "Murder" ought to have been the verdict of the jury, and that the sentence of ten years' penal servitude passed upon the prisoner cannot be considered a severe one.

THE DANGERS OF ELECTRIC LIGHTING.

THE notion was at one time current that an electric installation secured the householder from many of the risks attendant upon a gas installation or the use of oil and candles. It is very doubtful if this is so, at any rate under the present methods of laying cables and of "wiring" our houses. Recent events which have come to our knowledge call very seriously for a fresh inquiry as to the methods adopted for supplying electricity to our houses. It is common knowledge now that an otherwise innocent current—that is, one of low voltage—may through certain defects become an exceedingly dangerous current of enormous voltage. "Earthing" is, of course, the main source of trouble and the generally offered excuse, but if electric lighting is to be our mode of obtaining artificial light "earthing" must be overcome and it seems to us that "earthing" has not been overcome—it is happening on all sides and in several instances with most alarming results. Leakage has led to outbreaks of what have proved to be serious fires. Last week, for example, a serious outbreak of fire took place at some photographic studios in Regent-street and the fire brigade attributed the cause to the fusing of the cables at the switchboard. It is even said that the electric current used in these studios for the purpose of a flash-light "was sufficient to light St Pancras Station." Now, there is no objection to any person if he pleases having as much current as possible laid on to his premises, but in the interests of public safety the regulations in regard to the manner of laying on this supply should be very strict, and from time to time a careful inspection of the installation should be maintained, if need be, by statute. The importance of instituting a rigid control in these matters does not appear to be recognised. Yet the danger to the public is great. We might as well allow a large water main in communication with a reservoir containing millions of gallons of water at a high level to be erected over our heads without providing proper means of preventing leakage. In such a case a town could be easily flooded in a very short time and the inhabitants drowned, assuming there were no means of shutting off the supply. In our own experience "earthing" is constantly happening, and it is well known that in this manner a very high and dangerous current may be tapped by telephone wires, gas-pipes, or ordinary voltage electric cables. No wonder, then, that public electricity is becoming a serious cause of outbreaks of fire. Just upon a year ago we reported an instance in which a drawing-room floor was ignited either by the overheating of wires or by the production of sparks through a defective system of insulation. The system of wiring must sooner or later be reformed, and the sooner the better, or otherwise disasters are certain to arise. The subject was ventilated in the press, including our own columns, some months ago, and on the face of it there was then some promise that something definite would be done. As a matter of fact nothing or very little has been done, and all those who use the electric light are still at the mercy of defective fittings and under the risks of tapping a powerful and dangerous current intended only perhaps for arc installation on a large scale. These possibilities are most alarming and the Board of Trade should be approached with a view to enforcing by very definite regulations a safer method of installation of domestic electric lighting than appears to be in vogue now. Until this is done we may only too surely expect a crop of accidents, and no confidence, it seems to us, can be placed in an electric installation until cables and wires are placed in separate tubes and "return" wires are provided. The need of doing something in this direction is all the more emphasised by the fact that our streets are crammed with a close network of all sorts and conditions of wires, pipes, and mains.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

THE Medico-Psychological Association of Great Britain and Ireland held a general meeting on Nov. 21st at 11, Chandos-street, W., which was presided over by Dr. Fletcher Beach and was numerously attended. The meeting began at four and lasted for nearly three hours, three papers, with interesting discussions on each, being read in that time. The first paper was on Mental Disorders dependent on Toxæmias, by Sir Dyce Duckworth, and will be found printed in full at p. 1475 of this issue of THE LANCET. Our report of the discussions and of the other papers will appear later. Sir Dyce Duckworth was followed by Dr. F. W. Mott, who spoke at some length on Poison, Stress, and Inherited Tendency. After Dr. G. H. Savage had contributed a spirited criticism Dr. E. Goodall and Dr. Charles Mercier continued the discussion. Travel: its Abuse and Use in Mental Diseases was the subject of the next address by Dr. Savage. This theme elicited some valuable remarks from Sir Hermann Weber and Dr. Symes Thompson. The meeting had already lasted over two hours but the greater number stayed to hear Dr. Lewis-Jones on the Application of Electricity in certain Forms of Mental Diseases, and an interesting discussion on this therapeutic suggestion followed.

THE TREATMENT OF MALARIA BY HOMŒOPATHIC MEASURES.

ON Nov. 19th a meeting was held in the Exchange Buildings, Liverpool, under the auspices of the African Trade Section of the Liverpool Chamber of Commerce, to hear Dr. J. W. Hayward of Birkenhead, honorary consulting physician to the Liverpool Hahnemann Hospital, upon the treatment of malaria. Mr. A. L. Jones, whose generosity and enterprise in the cause of tropical medicine is well known to our readers, took the chair. Dr. Hayward mentioned certain recipes for keeping off mosquitoes, gave his theories as to the use and value of quinine, and expressed a wish that the Liverpool Chamber of Commerce would get an appointment on the West Coast of Africa in some malarious

latitude for a homœopathic practitioner. He said that mortality from blackwater fever under "allopathic medication" was appalling, and that chronic malaria would be extremely rare under homœopathic treatment. Mr. A. L. Jones thereupon promised to get "a qualified homœopathic medical man" a post on the West Coast. Mr. Jones is, in our opinion, doing a very imprudent thing in thus countenancing homœopathy. He will probably consider our view to be based upon narrow selfishness whatever we say, but such have been the services of Liverpool to scientific medicine that we cannot let these services be endangered without protest. Homœopathy is based upon theories exactly contradictory to medical knowledge, so that there can never be any common ground upon which a medical man and a homœopath can discuss a medical subject. Now, as medical men cannot work with homœopaths, and as all the men of any scientific position in the country are with the medical men, had not the Liverpool Chamber of Commerce better stick to the side whence it can always obtain a supply of sound assistance? By the way, there is not such a thing as a qualified homœopathic medical man, so that Mr. Jones has not committed himself to anything. A man can qualify in medicine and become a homœopath; but he cannot qualify in homœopathy, for the General Council of Medical Education and Registration does not recognise homœopathy.

PNEUMOCOCCIC OTITIS MEDIA.

OTITIS media is now well recognised as one of the manifold consequences of pneumococcic infection. It may be primary or secondary to pneumonia. At the meeting of the Société Médicale des Hôpitaux of Paris on Oct. 26th Dr. Hirtz related the following interesting case, the first on record in which otitis media was apparently contracted by contact with a patient suffering from pneumonia. A man, aged 65 years, had pneumonia of the right lung, which terminated favourably by crisis on the ninth day. His wife nursed him day and night and emptied and cleansed the spittoon. On the fourth day she had a purulent discharge from both ears. The pus was whitish and grumous and without odour. The discharge lasted about 12 days. She did not suffer in any way and under antiseptic treatment rapidly recovered. Both tympanic membranes were perforated. The appearance of this double otitis without antecedents in a person in contact with a patient suffering from pneumonia caused Dr. Hirtz to suspect that it was due to contagion. In the pus numerous pneumococci and small bacilli, the nature of which was not determined, were found. Contagion may have taken place through the auditory meatus or through the nose, possibly from the patient's hands soiled by contact with the spittoon. According to Zaufal the pneumococcus is the ordinary cause of primary otitis media or of otitis media ascribed to cold, but pyogenic microbes are usually found in secondary otitis. This case shows that those who attend on pneumonic patients should observe the same precautions as in cases of tuberculosis

DANGEROUS LUCIFER MATCHES.

IT has been a matter of frequent observation during the last month or so that many of the wax vestas supplied to the public have to a large extent had no ignition tip upon them or that if they had the head immediately flew off upon striking, scattering sparks in all directions. In short, for some reason which we do not presume to supply, an epidemic of defective wax matches appears to have set in. We approach the subject only from the point of view of its very obvious dangers. We have seen narrow escapes of very serious injury being done by particles of fired phosphorus shooting perilously near the eye in this way. In the smoking carriages on railway trains the danger is more obvious perhaps than anywhere else. A passenger strikes one of these matches and the flaming head flies off in the direction of a fellow passenger. In the house the flaming head may bury itself in a carpet or rug and there continue to glow until it ignites the material. We understand from a very responsible person connected with the subduing of outbreaks of fire in the metropolis that "unknown causes" are probably largely due to the lost glowing head of a wax vesta. Cheapness, we fear, is largely responsible for this nasty dangerous match. Matches are made at a tremendous speed, and we doubt if they are ever examined or tested before they are packed in boxes. We have counted as many as 30 per cent. of matches in one box without heads at all, while the majority of those with heads lighted viciously and in the dangerous manner which we have described. It is to be wished that the public would give up using wax vestas altogether or, at all events, those matches which contain yellow phosphorus. The burns from phosphorus are exceedingly painful and difficult to heal, while cases have been known in which death has followed through blood-poisoning set up by a wound caused by a scintillating match-head. Again, in discarding matches made with yellow phosphorus the public would be taking a decisive step towards banishing from our match factories that dreadful disease known as necrosis or "phossy jaw."

THE Queen in Council has granted to the Great Northern Central Hospital Letters Patent under the Great Seal incorporating the hospital by Royal Charter under the title of "the President, Vice-presidents, and Governors of the Great Northern Central Hospital."

DR. THOMAS BUZZARD, a Fellow and member of the Council of King's College, London, has been appointed one of the representatives of the College upon the Senate of the University of London in succession to Lord Lister who has resigned.

THE Executive Committee of the Prince of Wales's Hospital Fund have issued another appeal for subscriptions, the falling off in the financial support which the Fund has received this year being serious.

THE IRISH POOR-LAW MEDICAL SERVICE

IT is not unusual to hear in the political world such cries as "Another Irish grievance" and "Justice to Ireland" when questions relating specially to the Green Isle are being discussed; but we think that those who are conversant with the working of the Irish Poor-law Medical Service will freely admit that it is oppressed with grievances which common justice demands should be redressed. We propose to lay before our readers a few of these grievances, and to suggest some ways by which they may be remedied.

Method of appointment of medical officers in the Irish Poor-law Service.—Up to the date of the passing of the Local Government (Ireland) Act, 1898, the dispensary medical officers were appointed by committees, among whom there were some members (*ex officio*) of position and education. That Act, however, delegated the power of election to the guardians, who are in country districts almost all small farmers and shopkeepers. As a result it is too often a candidate's religion, politics, or local connexions which determine his selection, his professional standing being regarded as of little import. Further, there is no promotion. The dispensary medical officer remains, as a rule, in the original district to which he was first appointed; he has no stimulus to work, his salary does not steadily rise, and he finds there is no chance of advance. With such prospects the able men coming from the medical schools will not enter the service and in the end it will be the poor who will suffer most. To remedy such a state of affairs the Irish Medical Association have recommended the

guardians "to provide a proper means of classifying candidates according to professional worth and meritorious service, and to be guided by this in making their appointments." As we have little hope of such a suggestion being adopted, we think a fairer and wiser plan would be for the Local Government Board to classify the dispensary and workhouse hospital appointments in Ireland into grades (say, good and medium) and to select the medical officers by competitive examination (as in the army and navy). Those placed at the head of the list of candidates should be allowed, as in the Indian Civil Service, to choose out of the appointments vacant at the time of the examination the localities to which they would prefer to be sent. By this method merit alone would decide the appointments.

Remuneration.—Taking the average of the salaries paid to dispensary medical officers in Ireland, it is about £120 per annum. For this remuneration the medical officer has to attend an average of between 6000 and 7000 sick poor, spread over an area of, in the rural districts, 44 square miles. To enable him to work such a scattered community he requires two horses and a man to attend to them. Suppose he pays for the upkeep of his horses, the wages of his servant, and the repairs of his trap, harness, and the like £110 per annum (and anyone who has horses will say that this is a very modest calculation), he has for his salary £10 a year, for which he is worked like a galley-slave, summer and winter, day and night, Sunday and weekday, in wet and dry weather. In the intervals of attending the dispensary and visiting the poor the unfortunate Irish dispensary medical officer has to earn what will support himself and his family, and, owing to agricultural distress among farmers and the desertion of the country by the impoverished gentry, lucrative practice is in rural districts in Ireland becoming every year harder to obtain. It is little less than a scandal that no allowance is made for travelling expenses, and it is, indeed, hard to bear—human nature is so constituted—that while the dispensary medical officer is thus handicapped another public official in his district, who has plenty of time to shoot, to play golf, to hunt, and to fish—the district inspector of police—has £95 a year allowed for his horse, a sum nearly equal to the whole year's salary of the constantly worked dispensary medical officer. Not only is the remuneration inadequate, but in recent years when the guardians have had to make new appointments (owing to death or resignation) they have almost invariably cut down the existing salary. To give one among many examples. When the office of visiting medical officer to the Belfast Union Fever Hospital became vacant the guardians fixed the emoluments at £120 per annum, although the gentleman previously holding the appointment had begun with £150 and at the time of his resignation was receiving £175 a year. When challenged by the Local Government Board (who showed very great weakness in consenting to such a process of professional "sweating") the guardians replied, in a true commercial spirit, that they could get as good a man at that price (£120).

Superannuation.—Public officials are now compulsorily retired by the Treasury at 65 years of age and receive a superannuation, but in the case of the Irish dispensary medical officer a pension is only optional as the guardians may think fit. Hence, many medical officers in the Irish Poor-law Service, owing to the miserable payment, are compelled to continue too long at work, being too poor to resign, until advancing years and chronic disease, often brought on by the terrible climatic exposure which they have to undergo, render them physically quite unfitted for their arduous duties. We know of a case where a medical officer, over 80 years of age, crippled with rheumatism, was obliged, owing to financial reasons, to continue at his work. As a result it is really the poor who suffer. To remedy such a state of matters a dispensary medical officer "when he resigns or ceases to hold office for some cause other than misconduct should receive a superannuation allowance on the scale and according to the acts and rules relating to Her Majesty's Civil Service."

The ticket abuse.—There is no question about which a dispensary medical officer feels more strongly than that of the abuse in the issue of "tickets"—that is, orders compelling him to attend those mentioned in the "tickets." Every guardian may legally claim the right to issue such "tickets," which are too often liable to be given to people who are able to pay for medical attendance, or in cases of a simple nature in which the patients are quite able to attend at the dispensary, or to patients at all sorts of inconvenient hours. The greatest scandal is where the guardian issuing the "ticket" happens to be a publican or a small shopkeeper, and where there is the temptation to issue the "tickets" so as indirectly to push business. We have heard of a case where the touts of a shopkeeper, in their morning rounds booking orders, were provided with books of "tickets" which they were quite willing to fill up for any of their master's customers. The abuse in the issue of these "tickets" is most demoralising to the people whom it tends to pauperise. No "tickets" should be issued except by relieving officers or by a few guardians specially authorised, and no one who is able to pay for medical attendance should get a "ticket."

Holidays.—The hard-worked and under-paid Irish dispensary medical officer is of all public officials entitled to a holiday, and in support of this the Local Government Board in the rules they sent to the guardians put in an article "that each medical officer shall be allowed an annual vacation, not exceeding four weeks, and the guardians shall pay to the medical practitioner employed temporarily to discharge the duties of the medical officer for the period such reasonable remuneration for his services as the Local Government Board shall approve of or direct." If the article had only been worded "of four weeks" instead of "not exceeding four weeks" there would have been little or no trouble, but during the whole of last summer the guardians and the medical officers were wrangling as to the interpretation of this rule, and finally the Court of Queen's Bench decided adversely to the intention of the Local Government Board when framing the rule. So far no further rule has been sent from the central authorities to the guardians for their guidance.

Petty annoyances.—To a sensitive man trying conscientiously to do his duty nothing is more annoying than to see in the local papers (as constantly occurs) that charges have been made against him by some of the guardians at their weekly meetings without his ever having been communicated with on the subject. These complaints are frequently of the most trivial nature, such as not going at once in response to a "ticket," while perhaps he happened to be away at the opposite end of his district, several miles off, at the time that the "ticket" was left at his house; or not being punctual in his attendance at the local dispensary, when perchance he has been engaged at an anxious and difficult midwifery case. If a dispensary medical officer is to have a charge of neglect of duty made against him at a particular date by a guardian, he should be told beforehand, and very often his presence and explanation would make matters right, and if he is not able to attend no public notice should appear in the press; indeed, we think it would be wiser for all such matters in the first instance to be discussed in committee.

Such are a few of the grievances of the Irish dispensary medical officer, and it is indeed little wonder when we consider the wretched payment of the appointments and the annoyances to which those now holding them are so constantly exposed that the Irish Medical Association considered it their duty to send a circular last April to the hospitals, to the medical schools, and to professors, which practically advocated a "boycott" of the Poor-law Medical Service. We trust that in the near future the condition of the service will be improved. At present the Irish Poor-law Medical Service is the worst paid in the three kingdoms.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ANNUAL MEETING OF FELLOWS AND MEMBERS.

THE sixteenth annual meeting of Fellows and Members of the College was held on Nov. 15th, the President, Sir WILLIAM MACCORMAC, Bart., K.C.V.O., being in the chair.

The PRESIDENT in presenting the report of the Council remarked that he had been unable to be present at the meeting last year, as he had been elsewhere. There were a few things in the report to which he wished to draw the attention of the meeting: the Members had been granted the right to wear a gown; the Council had endeavoured to stop the use of the titles connected with the College by those who had no right to use them, and in one case they had been successful. He also wished to draw

attention to the very useful work which was being done in the laboratories of the two Colleges. The College had lost during the past year two distinguished Fellows—Sir James Paget and Mr. J. N. C. Davies-Colley. The report also dealt at length with the centenary of the College and the institution of the Honorary Fellowship. With regard to the motions on the agenda paper of the meeting the Council were inclined to think that the second motion, relating to suggested changes in the Medical Acts, was not strictly in order, as that matter was in the province of the General Medical Council rather than in that of the College, but they had allowed it to stand.

A discussion on the matters dealt with in the report then followed.

Dr. J. H. VINRACE drew attention to the fact that the names of the Fellows who had died during the year were printed in the report, yet the names of the Members were not given.

Mr. ATKINSON supported the suggestion that the names of the Members of the College who had died during the year should be printed in the annual report.

The PRESIDENT said that he did not see any reason why this suggestion should not be carried out, and he would bring it before the Council at their next meeting.

Mr. W. H. DAY mentioned that at the last annual meeting he had brought forward a motion, which was carried, that notice of the annual meeting should be sent to all the Members, but the Council had given in the report very poor reasons for not carrying out the resolution.

Surgeon-Major J. INCE proposed a vote of thanks to the Council for their report. This was seconded by Mr. CASS, and carried.

Dr. HERBERT L. SNOW then moved:—

That this meeting respectfully urges the Council not to carry into the new century the unfortunate controversy which has existed so many years with disastrous results, but by taking steps to confer representation on the Members to bring the institution into harmony with universal modern usage and with the obvious needs of the entire medical profession.

He pointed out that the struggle had now lasted a very long time and it could only cease by a recognition of the claims of the Members to representation on the Council. Under the present arrangements the President only represented one element in the College—namely, the Fellows. Yet the Fellows contributed last year to the funds of the College the sum of £1754 and the Members contributed £12,894. The authorities of the College were completely out of touch with the general mass of the profession. He appealed to the Council to remove the mediæval taint of non-representation from the College.

The motion was seconded by Mr. JOSEPH SMITH who expressed the hope that the Council would take the matter into their most serious consideration.

Mr. ATKINSON acknowledged that when the Fellowship was founded there was a great difference between the knowledge of the Members and of the Fellows and therefore there had been a reason for confining the franchise to the Fellows; but the conditions now were very different: a process of levelling up had been going on now for a long time and the Members were fully deserving of a share in the government of the College.

Mr. COLLINGWOOD was inclined to think that at least two-thirds of the Members of the College regretted that they had ever taken the diploma of the College.

When the motion was put it was carried *nem. con.*

Mr. GEORGE BROWN moved:—

That in view of the disabilities which affect the medical profession this meeting requests the Council to take any steps in its power towards obtaining a Parliamentary inquiry into the working of the Medical Acts with a view to their amendment.

He regretted to hear from the President that the motion was considered to be out of order. He pointed out that the duty of the General Medical Council was to carry out the law as it existed, and their expenses were so great that they could not afford to introduce a medical reform Bill. As the law at present stood removal from the Register was in many cases a positive advantage to a man. He considered that it was the duty of this College and of the Royal College of Physicians of London to take up this matter for the protection of the medical profession and of the public. He thought that it was only reasonable that those who held the double qualification should be allowed to call themselves "Doctor."

The PRESIDENT mentioned that in the year 1888 the two Royal Colleges had made an application to the Secretary of State that those who had the double qualification should have the title of "Doctor," but that the application had been refused.

Dr. DANFORD THOMAS seconded the motion. He showed that the present law had been found to be very defective in its working, so that it was impossible to suppress unqualified practice, for any quack could practise with impunity if he took care to avoid a few pitfalls. The law therefore needed reform and they appealed to the Council of the College to do their share in the matter.

Mr. DAY said that death certificates should be paid for, but at present a medical man had to give the certificate without charge and the registrar received a fee for any additional certificates required.

The motion was put and was carried *nem. con.*

Dr. THOMAS MORTON moved:

That in the opinion of this meeting every Member of the College is entitled to receive a copy of the annual report from the Council without application.

He mentioned that a similar motion had been carried at the last annual meeting. He claimed it as a right for the Members that they should receive the report in the same way as the Fellows. Of all the objections offered by the Council the only one of any importance was the expense. He had been told that the cost would amount to about £160. By employing a lighter paper the postage of the report would be a halfpenny, and in that way a large proportion of the expense would be saved.

Mr. J. BRINDLEY JAMES seconded and Dr. VINRACE supported the motion.

Surgeon-Major INCE opposed the motion on the ground that as a copy could be obtained by any Member on application there was no necessity for any change.

Mr. JOSEPH SMITH could see no reason why it should be sent to the Fellows and not to the Members.

Mr. DAY suggested that it should be sent only to those Members who were resident in the United Kingdom.

Dr. WALTER SMITH moved an amendment to the effect that the report should be sent until further notice to all Fellows and Members who should apply.

Dr. GEORGE JONES seconded the amendment, remarking that no similar corporation sent round an annual report to its members.

Dr. JOHN SMITH claimed that as the Members supported the College they were entitled to the report as a right.

The amendment was lost.

Mr. GEORGE BROWN wished to move an amendment that the report of this year, on account of its great interest, should be sent to all Members, but the PRESIDENT ruled the suggested amendment out of order and put the original motion, which was carried *nem. con.*

Dr. W. G. DICKINSON then moved:—

That this meeting considers that the Council would promote the wider interests of the profession and would not injure those of this College by agreeing to the recent recommendations of the General Medical Council with regard to (*a*) the combination with the Apothecaries' Society, and (*b*) the question of the commencement of scientific studies.

The motion contained two separate questions. As to the suggested union with the Apothecaries' Society, the Council in their report did not offer any explanation of their refusal to agree to it, though their representative on the General Medical Council had voted in favour of it and it was well known that the Hall was perfectly willing. As to the second question, the two Colleges of the Physicians and Surgeons had refused to obey the regulations of the General Medical Council with regard to registration of the institutions for teaching the preliminary science subjects.

Mr. W. G. BOTT seconded.

Sir ROBERT CRAVEN thought that it had been a great mistake to decline to join the Apothecaries' Society when the matter was brought forward some years ago, but the conditions had now completely changed. The Hall's examination was a perfectly satisfactory one, and he was inclined to think that the Hall was not at all anxious to join.

Mr. THOMAS BRYANT acknowledged that he had voted for the motion at the General Medical Council as he thought that it was a misfortune that the union had not taken place some years ago, but at the present time, when the University of London was being reconstructed, he thought that it was not advisable. With regard to the second part of the motion he could only say that the matter was not yet finished and that the action of the Colleges had been much misunderstood. He would ask the mover to withdraw the motion.

As the motion was not withdrawn it was put to the vote and was carried by 13 votes to 9.

With a vote of thanks to the President for presiding, the proceedings were concluded.

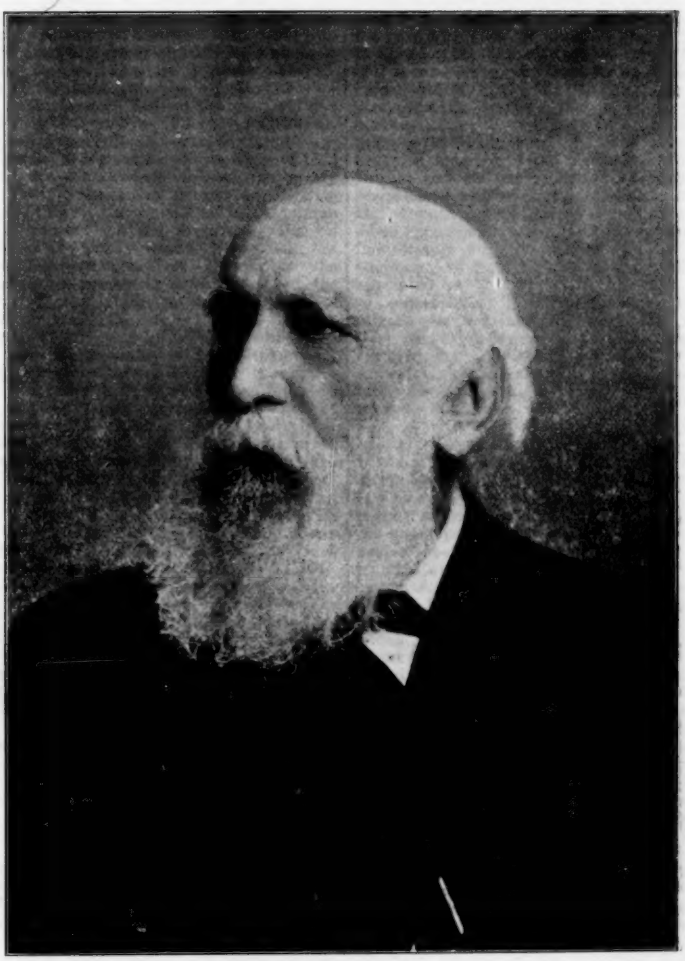
PROFESSOR CALMETTE ON PREVENTIVE MEASURES AGAINST PLAGUE.

PROFESSOR CALMETTE, Director of the Pasteur Institute at Lille, in delivering the third Harben Lecture at the Examination Hall of the Royal Colleges of Physicians of London and Surgeons of England on Nov. 21st, said it was now impossible to deny that the use of anti-plague serum as a preventive measure was an excellent means of preventing propagation of plague in an infected centre, as by its means persons exposed to the contagion could be rendered absolutely and immediately immune. Unfortunately the immunity thus obtained was of short duration, lasting only from 12 to 15 days, and it was therefore necessary during an epidemic to repeat the injection every second week. This was a serious inconvenience, to which must be added the difficulty of procuring a sufficient quantity of serum to vaccinate and revaccinate a large number of individuals. It had been proved by experiment on small animals that after repeated injections under the skin or into the veins of cultures of plague bacilli killed by an hour's exposure to a heat of 65° or 70° C., it was possible to inject after a sufficient interval into these same animals without ill-effects virulent cultures which would otherwise have been fatal in from three to five days. Haffkine, in India, having observed that these cultures vaccinated more effectually because they were richer in microbic bodies killed by the heat, added butter or cocoanut oil to his bouillons. These fatty substances floating on the surface enabled the plague bacilli to develop and form stalactites. A slight shake to the vessel containing the culture caused the fall of these stalactites; they were not long in re-forming, and thus in three or four weeks a liquid rich in microbic elements could be obtained. Haffkine then warmed these cultures, added a small quantity of phenic acid as a preservative, and injected them in average doses of from two to three cubic centimetres. If the injection of dead cultures was carefully repeated even twice or three times after seven or eight days' interval a more durable immunity could be obtained which would extend to three or four months in a monkey or guinea-pig and six months in a rat. It was therefore possible that, as Haffkine believed, a single inoculation with cultures killed by exposure to heat would suffice in many cases to render a man sufficiently immune to pass through a plague epidemic. This method was, however, open to some objections. Leumann had already called attention to the different degrees of virulence in the cultures employed and the variability in the composition of the mediums used for the preparation of the vaccine, thereby rendering them very uncertain. Further, he had proved with Salimbeni that during the period of immunisation with the heated cultures animals were extremely susceptible even to minute doses of plague virus. It followed, therefore, that if anyone during the incubating period of a slight attack of plague were to undergo the Haffkine inoculation the attack would be greatly aggravated—it would probably be fatal. But despite all this, it was incontestable that vaccination by heated cultures was capable of rendering very great service in times of epidemic. Many efforts had been made towards greater efficacy and practicability. In Italy, Terni and Baudi proposed to prepare anti-plague vaccine from the peritoneal secretions of rabbits inoculated with the plague bacilli in the peritoneum. This secretion, laden with leucocytic elements, was diluted in chemical solutions of sea-salts, placed for a few hours in a stove and heated to 60° C. In this way a liquid possessed of a fair amount of toxicity was obtained which, administered in weak doses, produced in animals a vaccinal immunity more lasting, according to its discoverers, than a single inoculation of the Haffkinian cultures. Yersin proposed to vaccinate with a species of slightly virulent plague bacilli by inoculating living microbes by means of the lancet. He (Professor Calmette) had studied the question in his laboratory during the past year. To prepare his vaccine cultures he employed a plain virus which originated in Oporto and which had never passed through any kind of animal; he kept it up by culture on gelose, re fertilising every eight or 10 days, the culture being raised each time to a temperature of 36° C. for 24 hours. The cultures were placed, still on gelose, in large flat bottles in which there was produced after 48 hours an enormous microbic development. 20 cubic centimetres of sterilised water were then put into the flat bottle, the cultures were scraped with a thin glass rod, and the emulsion thus obtained was poured into a filter upon fine sterilised linen to retain the fragments of gelose. The liquid containing the microbes was poured on to a paper filter and the microbes left on the paper were washed in sterilised water. They were then placed in a small quantity of water, heated for an hour up to 70° C., and afterwards dried in a vacuum. Thus bodies of dried plague bacilli free from every trace of toxin were obtained. These were kept in sealed tubes until required. For use they were suspended in sterilised salt water and injected under the skin or into the veins. Now that the comparative value as preventives of the anti-plague serum and of vaccine injections prepared by bacilli killed by heat had been considered prophylactic rules could be laid down. This prophylaxis must be based entirely on the knowledge recently acquired concerning the way in which the disease was propagated. The researches of Simond, Yersin, and Hankin had demonstrated that the malady was spread chiefly by fleas and rats It was, therefore, necessary to seek the best methods of destroying the largest possible number of parasitical insects and rats wherever there was an outbreak of plague. The best way for a town to avoid plague epidemics was to exterminate as completely as possible the rats and mice which populate houses, shops, and sewers; and it was desirable on the first appearance of a case of plague that a confidential note should be distributed to medical practitioners detailing the principal symptoms of the bubonic and pneumonic forms of plague, with the precautions to be taken to avoid contagion, and giving every necessary information respecting diagnosis and preventive vaccination.

Obituary.

DENNIS EMBLETON, M.D. DURH., M.D. PISA, F.R.C.S. ENG. F.R.C.P. LOND., L.S.A.

EARLY on the morning of Monday, Nov. 12th, there died at his residence, Newcastle-upon-Tyne, Dennis Embleton, the "grand old man" of the medical profession in the north of England. He was born at Newcastle-upon-Tyne on Oct. 1st, 1810, and consequently had completed his ninetieth year. He commenced the study of medicine in the year 1827 by apprenticeship to Mr. T. Leighton, at that time senior surgeon at the infirmary, to whom he paid, as was usual in those days, a fee of £500. He also studied at Guy's and St. Thomas's Hospitals and at Grainger's and, we believe, at Pilcher's Schools of Anatomy in London. In June, 1834, he became a Member of the Royal College of Surgeons of England. In the following year he was admitted a Licentiate of the Society of Apothecaries of London. In 1843 the Royal College of Surgeons of England instituted its Fellowship and on Dec. 7th of that year Embleton was one of the distinguished members of the profession upon whom the honour was conferred. Of the other original Fellows only two, Carsten Holthouse and Henry Spencer Smith, now remain amongst us. In 1836 the University of Pisa admitted him after the usual examination to the degree of Doctor of Medicine. Ten years afterwards he became a Licentiate of the Royal College of Physicians of London *intra urbem*, as it is marked in his own note. In 1853 the University of Durham admitted him to its M.D. degree by diploma and in 1859 he became a Fellow of the Royal College of Physicians of London. Between the years 1834 and 1837, when he finally settled in practice as a physician in his native town, Dr. Embleton spent a great part of his time in the South of Europe, studying in Paris, Rome, Bologna, Pisa, and other places. He was a great pedestrian then and he wandered on foot over France, Spain, and Italy. He was never tired of talking of the adventures of those days—those halcyon days—of the beauties of the southern scenery, of the grandeur of the cities, and of the manners and habits of the people with whom his own kind and genial disposition rendered it easy for him to amalgamate. He spoke French and Italian well, and was familiar with the literature of France and of Italy and loved the warmth and brightness of their sunny



DENNIS EMBLETON, M.D. DURH. & PISA, F.R.C.P. LOND., F.R.C.S. ENG.

climate as much as if he had been a native. To the end of his life he retained his affection for Frenchmen and Italians, who were always welcome to his hospitable board and to his almost open house. In the year 1834 a school of medicine was established in Newcastle by Dr. George Fife, Dr. Knott, and Mr. Frazer—Mr. John Fife (afterwards Sir John) Mr. Potter, and Mr. McAllum joining later. Five years after its establishment Dr. Embleton joined as lecturer on anatomy and as registrar. His connexion with the College was a long one, extending over a period of 33 years. In 1838 he was lecturing on anatomy and physiology. In 1852 he was appointed reader in medicine at the Durham University, and in 1870 he became, on the closer connexion of the medical school at Newcastle with the University of Durham, the first professor of medicine and of the practice of physic. This office, however, he only held for a very short time, Dr. Edward Charlton succeeding him in 1872, when Dr. Embleton's connexion with the Newcastle Medical School and with the University of Durham ceased. From 1858 to 1872 Dr. Embleton was the representative of Durham University on the General Medical Council. He was physician to the Newcastle-upon-Tyne Infirmary from April, 1853, to May, 1878, when he became consulting physician, which position he occupied at his death. From 1856 to 1873 he was physician to the Newcastle-upon-Tyne Dispensary and Fever House. During the active portion of his long professional career Dr. Embleton contributed a very large number of papers to current medical literature. One on Tenderness and Pain of the Pneumogastric Nerves and the Importance of the Sign in Cases of Disease of the Stomach, Liver, and Heart attracted the attention of the late Sir Thomas Watson, who alluded to its importance in his classic lectures on the Practice of Physic—lectures which it is as great a delight to read to-day as when they were written. It was not, however, with medicine only that Dr. Embleton was identified. He took an active interest in science generally and in literature. He was a good antiquarian and a first-rate naturalist. At different times he was vice-president of the literary and philosophical, the natural history, and the antiquarian societies of Newcastle. He was for years one of the best known educational leaders in the north of England, no *savant* ever visiting Newcastle without asking for, and making the acquaintance of, Dr. Embleton. He wrote papers on local folk lore, dialogues and poetry in Northumbrian vernacular, short histories of the Newcastle Medical School and of Featherstone Castle, lives of his friends Joshua Alder, John and Albany Hancock, and W. C. Hewitson. His contributions on natural history, of which he was particularly fond, were numerous. The late Prince Consort, at the request of the Queen, sent him a book on the natural history of Braemar in acknowledgment of a work published jointly by himself and Albany Hancock on the Anatomy of Doris. He was an authority on the nudibranchiate molluscs and on eggs, birds, fishes, and local fossils, writing many valuable and interesting papers, sometimes by himself, at others in connexion with Joshua Alder or Albany Hancock. Dr. Embleton married in 1847 Miss Turner, a lady herself devoted to natural history and scientific pursuits, but he became a widower in 1869. He has left two daughters, one of whom—the elder—is married. The other daughter, who is unmarried, lived with her father and devoted her life to his comfort and welfare, nursing him through a long and trying illness with a care and affection which could not have been exceeded. His only son, Dr. Dennis Cawood Embleton, died at the early age of 46 years only a few months ago at Bournemouth, where for a number of years he had conducted a large practice and where he was much respected and beloved. A grandson, Dennis Embleton, is an undergraduate studying medicine at Christ's College, Cambridge.

Dr. Embleton had outlived his generation and probably, with the exception of Lord Armstrong and Mr. T. Lightfoot (the oldest surgeon in Newcastle), none of his old friends or contemporaries remain. The funeral took place on Thursday, Nov. 15th, at St. Andrews cemetery. The coffin was covered with beautiful wreaths of flowers, many of which had been sent from long distances and from various parts of England. Sir George Hare Philipson and the members of the Durham University College of Medicine attended, and among the mourners, besides relatives, were representatives of the institutions with which Dr. Embleton had been connected and many well-known citizens of Newcastle.

RICHARD BENJAMIN ANDERSON, F.R.C.S. ENG.

WE announced briefly last week the death of Mr. R. B. Anderson, late of Tobago, whose name is well known in the medical profession first as the victim of a terrible miscarriage of justice, and second as a would-be reformer of the most drastic sort in medical politics and honorary secretary of the Corporate and Medical Reform Association.

Mr. Anderson, who was 53 years of age at his death, was born in Lincolnshire, being the son of a medical man. He received his medical education at St. Mary's Hospital, and in 1869 became a Member of the Royal College of Surgeons of England. He obtained several prizes and held appointments as house surgeon both in London and Plymouth. In 1873 he became a Fellow of the College, and then joined his brother, Mr. James G. Anderson, in the West Indies, settling in Tobago, where he attained considerable success in practice and received the appointment of Colonial Surgeon. This office, which, after he had held it for five years was discontinued, brought him a small pension by way of compensation. By the year 1889 he had been 16 years in practice in the island, and was then a justice of the peace, a member of the legislative body, and a landowner. In that year he was consulted by a coloured woman named Marshall who suffered from a necrosis of the lower jaw, and Mr. Anderson with the assistance of a medical friend cut down upon the sequestrum. The sequestrum did not separate immediately and the patient and her friends, not understanding the pathology of the condition, were much disappointed at the delay in the cure, and finally became so objectionable in their manner that Mr. Anderson refused to continue to treat the case. A fortnight later the sequestrum became loosened and was easily removed by another medical man with his finger. Mr. Anderson's professional charges not being paid, he took proceedings in the Petty Debt Court, and after some inexplicable delay found that the Chief Justice, Sir John Gorrie, who was then in the island of Trinidad, had given special directions that this case was not to be tried until his (Sir John Gorrie's) arrival in Tobago. In the meantime Mrs. Marshall and her husband sued Mr. Anderson *in formâ pauperis* for £15 damages. There was no shadow of proof that the female plaintiff had sustained any injury, and the principal charge alleged against the defendant was neglect, inasmuch as he had improperly ceased to attend the plaintiff and had retired from the case before recovery was complete. In the result the Chief Justice, in the beginning of 1890, gave judgment for the plaintiff for the sum of £17 10*s*., with costs for breach of contract—for which the plaintiffs had not sued, neither had their plaint been amended to include it. Sir John Gorrie further stated, without any reservation, that a medical man, as such, and merely by becoming qualified, was bound to attend all cases of illness to which he was summoned, and that no medical man had a right, without the consent of the patient, to abandon any case which he had begun to treat, even where other medical aid was available and where the patient was running no risk from such abandonment, and that by so doing he laid himself open to an action at law, civil or criminal. He also stigmatised the making of contracts prior to attendance as an unprofessional and improper act on the part of the practitioner. It is almost needless to add that Mr. Anderson's claim for fees was disallowed by Sir John Gorrie. About a year afterwards—viz., on Jan. 20th, 1891—summonses were taken out against Mr. Anderson by the Marshalls. The plaintiffs sued *in formâ pauperis*, no affidavit was made to show that the claims were unpaid. The total amount of the judgment debts, including costs, was £42 2*s*. The case was tried in Tobago before Mr. Justice Cock, and Mr. Anderson was on Jan. 23rd ordered by this judge, upon adjournment of his examination, to give his security in £500 and also to find bail in £500 for his appearance at the adjourned hearing of the summons, and in default of giving such security he was committed to prison, where he remained until the adjourned hearing was resumed on Jan. 30th. On that day Mr. Justice Cock again adjourned the hearing after some examination and required Mr. Anderson to find security for his appearance, as before, in two sums of £500 each. Five well-known residents, three of whom were members of the Legislative Council, perceiving that a grave injustice was being perpetrated, went in a body to the judge to offer the security. Mr. Anderson was then liberated, having been

imprisoned for not finding £1000 bail as security for a debt of £42 2s. which had never been legally proved against him.

That the administration of justice in the West Indies by Gorrie and Cook was a disgraceful farce had long been the opinion of the European residents. Mr. Anderson, who had petitioned the Crown and been threatened with proceedings for contempt of court consequently, was sent to England in 1891 by public subscriptions raised in Trinidad, to lay his wrongs before the home authorities and the public. On Sept. 14th of that year he instituted his remarkable action in the Court of Queen's Bench against the Trinidad judges (Anderson *v.* Gorrie and others). The facts disclosed were too flagrant to be overlooked. In 1892 a Royal Commission, consisting of Sir William Markby and Sir Frederick Pollock, was appointed to inquire into the administration of justice in Trinidad and Tobago, and their report resulted in the removal of Mr. Justice Cook from office. Sir John Gorrie was also interdicted pending the formal bringing of charges against him, but the interdiction was soon followed by his death. Mr. Anderson's action against the judges only came on in April, 1894, and occupied seven days, before the late Lord Chief Justice Coleridge and a special jury of Middlesex. He appeared in person and successfully held his own against five counsel employed by the defendants. In the course of the trial Lord Coleridge stigmatised the imposition of the bail already mentioned as "a piece of unmitigated, unlawful tyranny," and in the course of his summing-up said:—"The proceedings for contempt of court against the plaintiff for having petitioned the Queen were quite unjustifiable. Then judgments having been obtained against Mr. Anderson for £42, Mr. Justice Cook held him to bail for £500. He confessed he could not understand how an English judge could have so acted." The verdict was as follows:—"The jury find that the defendant Cook oppressively and with malice overstrained his judicial powers to the prejudice of the plaintiff and the wilful perversion of justice, and found a verdict for the plaintiff for £500." Lord Coleridge, however, entered judgment for the defendant on the ground that no action could lie against a judge for an act done in his judicial capacity, and this judgment was confirmed by the then Master of the Rolls (Lord Esher) and the Court of Appeal.

Mr. Anderson thus became the helpless victim of judicial persecution. Having been forced into heavy expenditure in defence of his personal rights he had the additional mortification of finding that the survivor of his persecutors was by a legal technicality superior to the ordinary operation of the law. Under the terrible strains and mortifications which he had courageously endured for several years Mr. Anderson, now completely ruined in purse, bore himself with unflinching courage. It would, perhaps, have been better for him—he certainly would have been a happier man—if he had ceased to struggle against the gross injustice of his fate. But this his courage and determination would not allow him to do, and he spent the remainder of a most unfortunate life in resenting the position to which the unjust and drunken colonial judges had reduced him. His efforts on behalf of general medical reform, though honestly undertaken for the sake of the rank-and-file of the medical profession, were all inspired by the abiding sense of his own wrongs. The General Medical Council being unable to take cognisance of his case stood convicted in his eyes of ineptitude, while he was ready to maintain the illegality of its constitution and the necessity for its root and branch reform. The governing body of the Royal College of Surgeons of England, making no sustained effort to help him—a Fellow of the corporation—in his struggle, became in his eyes a body that required complete reconstruction, and his voice was among the loudest, if not among the clearest, of those who demanded for all Members of the College a proper representation on the Council. But, we regret to say, having that cause at heart, that the position of the Members lost by Mr. Anderson's advocacy. Protracted litigation, often personally conducted, had left him with a feeling concerning legal phraseology that was little short of superstition. He had found himself on many occasions opposed in his procedure by the wording rather than by the spirit of certain Acts of Parliament, certain verdicts, and certain charters. Consequently, in framing resolutions in support of various broad schemes of medical reform, he was wont to make his motions so elaborate in their provision against possible misconception that they became to the ordinary understanding mere involved verbiage. The medical profession cannot be blamed for withholding serious support from propositions so incoherent as those for which Mr. Anderson was wont to stand sponsor upon all public occasions.

But it would be an injustice to the memory of a brave and deeply wronged man if his character were to be finally judged by some of his later acts and utterances. Impelled, as no doubt he was, by his private wrongs to take up the rôle of public champion of the rights of his profession, from the time that the grievances which he desired to redress were public and not private ones he ceased to obtrude his personal wrongs; while as a reformer the line which he took was fairly correct, though his methods were more than occasionally wrong-headed. With his death is closed a lurid page in the constitutional history of this country. Mr. Anderson was ruined by unjust judges, and this not under some corrupt Oriental autocrat with a mediæval scheme of misrule, but less than a decade ago under the British Crown.

GEORGE CORDWENT, M.D. ST. AND, F.R.C.S. ENG., L.S.A.

DR. GEORGE CORDWENT died at his residence, Milverton, Somerset, on Nov. 12th, in his eighty-sixth year. Dr. Cordwent received his medical education at St. George's Hospital and qualified as M.R.C.S. Eng. and L.S.A. in 1840 and in 1841 respectively. He graduated as M.D. at St. Andrews University in 1859 and three years later he was admitted F.R.C.S. Eng. Dr. Cordwent practised in Taunton for many years and was on the honorary staff of the Taunton and Somerset Hospital. He was a former president of the West Somerset Branch of the British Medical Association. About 25 years ago he retired from practice and settled at Milverton. Dr. Cordwent was a life-member of the council of St. Andrews University and also a Fellow of the Chemical Society. He took a great interest in archæological subjects. Dr. Cordwent married a Miss Mathias of Taunton who predeceased him many years ago and he leaves no children. The deceased was much respected in Milverton and the funeral, which took place there on Nov. 16th, was largely attended.

THE WAR IN SOUTH AFRICA.

THE IMPERIAL YEOMANRY FIELD HOSPITAL AND BEARER COMPANY.

BY CHARLES STONHAM, F.R.C.S. ENG.,

CHIEF SURGEON AND OFFICER COMMANDING THE IMPERIAL YEOMANRY FIELD HOSPITAL; SENIOR SURGEON, WESTMINSTER HOSPITAL, ETC.

IN my second letter,[1] sent to you from the Devil's Kantoor, I gave you some account of our marches east and north of Pretoria, to which place we returned from Warm Baths on August 28th, reaching Pretoria at 9.30 A.M. on the 28th after covering a distance of 64 miles. Sending our ambulances on to the Irish Hospital, which is established in the Palace of Justice, we proceeded to camp near the Racecourse, and spent the rest of the day with our five weeks' mails, which were brought into camp by the returning ambulances. We all looked forward to a few days' rest, which had been well earned by the men and transport animals of all units—of the latter, indeed, we had lost many, and those which were still alive were worn out with long marches and scanty rations. The forced march of 64 miles from Warm Baths, coming as it did at the end of a month's hard trekking, had played havoc with the mules; indeed, the field hospital and bearer company combined had to requisition for 70 fresh animals to make up for those dead or quite unfit to move. We were, however, only able to draw 10—60 being the total number allowed for the whole brigade; and when I tell you that all units were in this respect as badly off as ourselves, you will have some idea of the extreme difficulties of transport.

The day after our arrival in Pretoria (August 29th) Major Hale, D.S.O., R.A.M.C., and I went to No. 3 Model School Hospital (commanded by Major R. W. Ford, R.A.M.C.), to

[1] THE LANCET, Nov. 17th, 1900, p. 1453.

which we had lent our detachment for the time being. We made all arrangements for the detachment which appeared necessary to us, exchanging one or two sick men and providing for the sending home of most of the St. John Ambulance men who were time-expired. We drew a few stores, and changed a couple of our carts so that we should be ready to march at once when orders arrived. For these we had not long to wait, for at about 12 o'clock we received marching orders for the following day. I must say that these orders were received with some regret, as, although we were all most anxious to go on, yet the whole brigade had confidently looked forward to a little rest and time to refit.

General Hamilton and his division (with the exception of Mahon's brigade) went east on August 29th by train. Our brigade was to march. On the 30th we struck camp at 7 A.M. and marched through Pretoria at 9 A.M., passing the recently established Yeomanry Branch Hospital in the grounds of Beckett's house at Sunnyside. It looked most business-like, with everything in full swing. The orderlies and the nurses came to the railings to see us pass. On the opposite side of the road was the Langman Hospital. We camped at Donkerhoek at 5.30 P.M. On Sept. 1st we arrived at Balmoral, having camped the night before two miles south of Bronkhorst Spruit. Our march on this day was by no means pleasant, as we had to pass along the road where our animals had perished in such numbers during the storm of the night of July 25th. The stench was abominable and nauseating and, although we are pretty well used to this kind of thing now, it was so obtrusive that everyone was glad when this part of our journey was over. On Sept. 3rd we passed through Middelburg and sent our sick to the hospital there. We camped at Wonderfontein on the 4th. On the 5th as we were inspanning we heard heavy gun-fire to the north-west of us, and after marching on our journey about three miles our artillery and mounted troops with two ambulances under Major Hale were ordered back. The rest of the convoy, with the infantry, outspanned until late in the afternoon, when, the mounted troops beginning to return, we moved on and camped after marching for two miles. We found that our troops had arrived too late, and that the Boers under Commandant Trichardt, who had attacked a party of Canadians guarding the railway between Pan and Wonderfontein, had been beaten off. Our ambulances took five wounded men from the camp of the Canadians to Wonderfontein railway-station to await a train for Middelburg.

On the 6th we joined General French's division at Carolina and rested there till the 9th, on which date the division marched into the hills in the direction of Barberton. Major Hale and Dr. Green with two ambulances followed Mahon's cavalry, the rest going with the main convoy. About 10.30 A.M. our advanced guns engaged the enemy and the convoy parked at the foot of a hill on which two of our guns were placed. The guns soon drove the enemy from the opposite hill and after lunch I rode forward to the advanced battery and watched the action for the rest of the afternoon. It was most exciting, especially at the finish when the mounted Boers broke cover and made up the hill which we had been shelling as hard as they could go under a perfect hail of shell-fire from the battery. The division now advanced, crossed the hill which we had been shelling, and encamped about 8 P.M. in the valley, some of the convoy not coming in till the following morning. As the convoy was passing over the hill we had just been shelling the Boers sent two shells which passed just over our heads and fell on the other side, fortunately without bursting. Our casualties in this action were five wounded. One man, who was shot through the head, died in our hospital on the 12th. On the next morning we continued our march. We were now fairly in the mountains. The roads were very bad, and they may be best likened to a dissipated switchback. They are broken by numerous drifts over the Komati river, which takes a very winding course through the valley. On all sides of us were mountains—indeed, the country was such that had the Boers chosen to hold it at almost any point, they might have defied us indefinitely. On the 12th we camped at the foot of Roodehoogk, an exceedingly steep pass about half a mile long. Our guns shelled the Boers from their position here during the morning. The remainder of the day and the two days next following were taken up in getting the troops and convoy over the pass—a by no means easy task, as each wagon required a minimum of 24 mules, so that constant relays of animals had to be sent down the hill until the last wagon reached the top. Our turn to ascend the hill came on the 14th. General French had moved on with his cavalry the day before to make a forced march to Barberton, the 4th Cavalry Brigade being left to guard the pass, and the next day the rest of us marched to the top of the Devil's Chute, which we descended the following morning. The top of the Devil's Chute is about 7500 feet or 8000 feet about sea-level, and from it there is an extensive and beautiful view of the lower ground surrounded by mountain chains with Barberton about 20 miles distant. The Devil's Chute is a winding road about three miles long descending about 2500 feet or 3000 feet to the lower, but still hilly and broken, ground. Many wagons and animals which had come to grief in the descent bore witness to its difficulties. Our mules were now thoroughly done up; we had lost so many that even after inspanning our horses our teams were reduced to six animals, and we only just managed to creep into Barberton on the 17th, when we sent our sick to the Boer hospital. This march to Barberton will certainly rank as one of the great marches of the campaign, and some idea of its difficulties may be formed when I tell you that the Boers at Barberton—and, indeed, the English residents too—thought that it would be impossible for us to enter the town with our heavy guns and convoy. When it was evident to the former that we not only could, but would, enter Barberton, the Boers made preparations to go, but General French pushed on and arrived two days before he was expected. This caused the Boers to beat a hasty retreat and they left large quantities of stores and over 40 engines. I need not dwell upon our stay at Barberton, where we were detained for lack of transport till Oct. 2nd. We obtained supplies and a small supply of fresh vegetables, which were very welcome, as we began to feel the absence of the latter severely—indeed this is one of the chief drawbacks to long marches through an absolutely barren country. Unfortunately there was absolutely no forage to be obtained and our transport animals had to pick up a living as best they could on the veldt. Needless to say they died daily. A few days before we left a small quantity of forage was issued, and had it not been for this most of the poor animals would have died. On Sept. 20th the 4th Cavalry Brigade, which had been left to guard the pass, marched in followed by the Naval Brigade with their 4·7 gun.

On Oct. 1st we received orders to march on the following morning. We were to proceed by the Devil's Kantoor and we were only to take such wagons as we could find full teams for. All the others and the greater bulk of our stores, with the dismounted men, were sent to the station where they would be entrained as soon as the line was repaired. We accordingly left two officers and 35 men with seven wagons who camped near the station. These were sent on by train and we found them waiting our arrival when we got to Machadodorp. On the 2nd Major Hale, Dr. Green, and I, with 28 men, moved off with 10 carts, after passing a most disagreeable night in consequence of the very high wind and perpetual duststorms. We marched for 18 miles and camped at the North de Kaap river, the rest of the column going four miles further on. Mahon's brigade was now virtually broken up. The Imperial Light Horse had been sent on on Oct. 1st, and we understood that they went to Pretoria for disbandment. M Battery, the ammunition column, Lumsden's Horse, and a few details were now all that were left, the others either having been sent away by train or being left at Barberton as a garrison. During the night a series of heavy thunderstorms commenced, which lasted, practically without intermission, for 18 hours. The lightning was extremely vivid and, I regret to say, was fatal to two men in the ammunition column, besides injuring some others and killing some mules. Personally I have never experienced such terrible thunderstorms before.

On the 3rd we commenced the ascent of the Kantoor by a very bad road, which was excessively steep in parts and wound up the mountain for about seven miles. This day we did about four miles in pouring rain, accompanied by heavy thunder and lightning. The next two days were occupied in getting the wagons up. This had to be done in detachments, as each wagon required 26 mules. The road was exceedingly picturesque and from the top of the Kantoor a magnificent view of the mountains surrounding the low ground in which Barberton lies was obtained. On the 6th we reached Godwan Rivier station, and before we proceeded further we had again to cut down our convoy as there was another hill to be ascended at Waterval Onder which,

according to accounts we had received, was worse than anything we had yet passed. We left Dr. Green with all the baggage and what little stores we had, two carts, and all the men but eight, to go on to Machadodorp by train. Major Hale and I, with eight men and the rest of the wagons, quite empty except for kits, marched to Nooitgedacht, where I took the opportunity of going over the prisoners' quarters. Our march was through a beautiful valley, and had it not been for the wind and heavy duststorms would have been most enjoyable. On arriving at Waterval Onder about mid-day on the 8th we saw the hill of which we had received such terrible accounts and we were agreeably surprised to find that there was really nothing formidable about it; indeed, in the afternoon we marched up it without difficulty with our usual 10 spans of mules. The following day we reached Machadodorp, where we found the rest of our men and wagons who had preceded us by train. General French's division and some of Buller's troops were here and made a very big camp.

On the 11th we received orders to take part of the field hospital and bearer company and march on the next day with Mahon's brigade, which had been re-formed, the rest of our men being left behind to go to Pretoria by train as soon as possible. Late at night these orders were countermanded from Pretoria, and we were ordered to cross to the north of the line at daybreak and to take over the sick from the field hospital which was to take our place in Mahon's brigade. This, in view of the fact that the Yeomanry, volunteers, colonials, and reservists were being sent down, looked like an early return home, and although, as we had been with General Mahon for three months, we were sorry not to accompany him further, we were all delighted at the prospect before us. We remained at Machadodorp until the 21st, when we entrained for Pretoria, arriving there on the 22nd. During our stay at Machadodorp we had admitted nearly 100 patients, sending them down by sick convoy as opportunity offered.

I have now brought our wanderings up to date and I am afraid some of your readers may be inclined to say, "This is all very well, but he has said nothing about the medical and surgical work which the hospital has done." I have purposely refrained from doing so, as it seems to me injudicious to interlard my letters with professional details. However, when our work as a field hospital and bearer company is definitely terminated I hope to furnish you with such professional details as I think may prove interesting.

Pretoria, Oct. 23rd.

THE BATTLE OF THE CLUBS.

MIDLAND MEDICAL UNION.

THE inaugural meeting of the above union was held at Nottingham on Oct. 10th, Mr. J. G. SHEA of Chesterfield being in the chair. There was a representative attendance of members from Nottingham, Derby, Belper, Mansfield, Chesterfield, and the neighbourhood. The Nottingham and District Medical Union were received *en bloc* as members and now constitute the Nottingham branch of the Midland Medical Union. Dr. E. Jepson, President of the Durham Medical Union, had kindly promised to deliver an address but was prevented from being present. His address has been printed and circulated amongst the members.

The following officers were elected:—President: Mr. J. G. Shea (Chesterfield). Vice-President: Mr. T. Geraty (Nottingham). Treasurer: Dr. F. R. Mutch (Nottingham). Honorary secretaries (*pro tem.*): Dr. E. H. Houfton (Shirebrook) and Mr. C. J. Palmer (Mansfield-Woodhouse).

A representative council was also elected and a code of rules was adopted, the principal of which were as follows:—

1. Name of association: "Midland Medical Union."
2. Objects: (a) To protect the interests of members of this association in every respect, but more particularly from unfair competition, and from any attempts that may be made to induce or compel medical practitioners to accept insufficient remuneration for professional services; (b) to establish and maintain minimum rates of payment for medical contract work in relation to miners and all classes of workmen, members of friendly societies, sick and other clubs, lodges, insurance and other companies and societies.
3. Every registered medical practitioner residing in or near the counties of Nottingham and Derby shall be eligible for membership. Application to be the recognised form and election by a majority of the council.
4. The annual subscription for each member be 5s., payable in advance on Oct. 1st. A guarantee fund shall be formed limited to 21s. per member, to be called for in case of necessity only.
5. The officers of the union shall be elected annually and consist of president, vice-president, secretaries, treasurers, solicitors, and council. The council to consist of two or more members from each branch, four to form a quorum.
6. The annual meeting shall be held in October, at place to be decided on by council.
8. A special general meeting shall be called by the President at any time upon a requisition signed by six members, such special meeting to consider no other topic than that for which the meeting was called.
9. No member of the union shall oppose any practitioner in any course of action which he may take, with the previously expressed sanction of the council, for the general good of the profession.
10. Any member acting, in the opinion of a special meeting called for the purpose, contrary to the laws and regulations of the union shall, upon a majority of at least three-fourths of the members present, be suspended or expelled, and without appeal, from the union.
11. A special meeting, called for the purpose of considering the conduct of any member of the union, shall only be convened after 14 days' written notice has been sent to the last known address of each member, and such notice shall state clearly the purpose for which such meeting is convened.
14. No new law shall be adopted, and no existing law be altered or rescinded, except at the annual general meeting or at a special meeting called for the purpose, and 14 days' notice of such proposed alterations, signed by at least three members, shall be sent to every member of the union in the circular convening the meeting.

LOCAL ASSOCIATIONS.

15. That any existing local association of medical practitioners or groups of practitioners in districts where there are such local associations be empowered to form or become a local association of this union, and that each member of such local association having paid to this union the annual subscription for the time being, payable under the foregoing rules, such local association shall be allowed by this union reasonable expenses for carrying on the work of such local association in relation to this union, and also have full authority to direct and control their own local affairs, subject to all questions of special importance being referred to this union and governed by the rules thereof.

It is hoped that all medical men in Nottinghamshire, Derbyshire, and the neighbourhood will become members so that something may be done to improve rates of pay for contract work and to deal with other matters of medico-political interest.

The honorary secretaries will be glad to give any information respecting the union and to receive the names of those wishing to become members

THE BIRMINGHAM AND DISTRICT GENERAL MEDICAL PRACTITIONERS' UNION.

In THE LANCET of Dec. 30th, 1899 (p. 1866), we announced the formation of this union. The report of the council of the union to the members for the first year of its existence has just been published. The area with which the union deals is that known as "Greater Birmingham"; it has a radius of some five miles from the centre of the city and it has been divided into 14 medical wards. The members of each ward elect representatives to serve on a central council. Members to the number of 202 have already been enrolled. We gather from the report that owing to the influence of the union five general practitioners have been elected on the council of the Birmingham Medical Institute. Inquiries have been instituted into the abuses of the club system, and though the council of the union do not consider the present time opportune for dealing with the question as a whole, yet they are prepared for action in the case of individual clubs if they are appealed to. We wish the union success, for it is only by organisations of this kind that the abuses affecting the medical profession will ever be remedied.

The officers for the ensuing year are the same as last year, all having been re-elected. They are as follows:—President: Dr. W. E. Parkes. Vice-Presidents: Mr. H. R. Leech and Mr. R. A. Newton. Treasurer: Dr. W. H. Line. Secretaries: Dr. E. D. Kirby, Mr. J. Neal, and Dr. C. Robertson.

THE CORONER AND THE DEATHS OF LUNATICS IN POOR-LAW INSTITUTIONS.

THE following General Order has been addressed by the Local Government Board to the guardians of the poor of the several Poor-law unions in England and Wales, to the boards of management of the several asylum districts formed under the Metropolitan Poor Act, 1867, and to others whom it may concern:—

Whereas it is expedient to provide for the notification of the death of every poor person of unsound mind in any workhouse or in any other building subject to the government of a board of guardians or joint committee of two or more boards of guardians or board of management

to the coroner of the district in which such workhouse or other building is situated:

Now therefore we, the Local Government Board, in pursuance of the powers given to us by the statutes in that behalf, hereby order as follows:—

Article I.—In this Order:

The expression "Poor-law Institution" means a workhouse, a workhouse infirmary or other building subject to the government of a board of guardians or joint committee of two or more boards of guardians, or a district asylum subject to the government of the board of management of an asylum district.

The expression "Superintending Officer" means in the case of a workhouse, the master; in the case of a workhouse infirmary, the superintendent, or where there is no superintendent, the steward; in the case of an asylum subject to the government of the board of management of an asylum district, the medical superintendent or other head officer; and in default of any such persons includes any other officer whose duties comprise the notification to the pauper's relatives of the death of any pauper in a Poor-law institution.

The expression "Lunatic" means an idiot or person of unsound mind.

Article II.—Within 48 hours after the death of a lunatic in a Poor-law institution notice of such death shall be sent by the superintending officer of such institution to the coroner of the district in which the institution is situated, and such notice shall be accompanied by a statement signed by the medical officer or the medical superintendent or the medical man who attended the lunatic in his last illness and containing the following particulars:—

1. The name, sex, and age of the lunatic.
2. Whether married, single, or widowed.
3. The apparent cause of death.
4. The time of, and any unusual circumstances attending, the death; also a description of any injuries known to exist at the time of death or found subsequently on the body of the deceased.
5. The duration of the disease of which the lunatic died.
6. The names and descriptions of any persons present at the death.
7. Whether or not mechanical restraint was applied to the deceased within seven days previously to death, with its character and duration if so applied.

Article III.—This Order shall come into operation from and after the first day of December, 1900.

Given under the seal of office of the Local Government Board, this 3rd day of November, 1900.

HENRY CHAPLIN, President.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 33 of the largest English towns 6208 births and 3917 deaths were registered during the week ending Nov. 17th. The annual rate of mortality in these towns, which had been 17·6 and 16·9 per 1000 in the two preceding weeks, rose again to 17·6 last week. In London the death-rate was 17·1 per 1000, while it averaged 17.9 in the 32 provincial towns. The lowest death-rates in these towns were 9 5 in Norwich, 11·9 in Croydon, 12·1 in Cardiff, and 13·4 in West Ham; the highest rates were 20·5 in Liverpool, 21·6 in Newcastle, 21·9 in Manchester, and 24·8 in Salford. The 3917 deaths in these towns included 353 which were referred to the principal zymotic diseases, against 485, 425, and 356 in the three preceding weeks; of these, 72 resulted from diarrhœa, 71 from "fever" (principally enteric), 70 from diphtheria, 62 from whooping-cough, 47 from measles, and 31 from scarlet fever. The lowest death-rates last week from these diseases occurred in Cardiff, Norwich, Huddersfield, Halifax, and Gateshead, and the highest rates in Brighton, Wolverhampton, Nottingham, Preston, and Sheffield. The greatest mortality from measles occurred in Brighton; from whooping-cough in Nottingham, Derby, Preston, and Sheffield; from "fever" in Plymouth, Derby, and Sunderland; and from diarrhœa in Swansea, Wolverhampton, Nottingham, and Bolton. The mortality from scarlet fever showed no marked excess in any of the 33 large towns. The 70 deaths from diphtheria included 32 in London, seven in Leicester, seven in Sheffield, five in Liverpool, and four in Portsmouth. No fatal case of small-pox was registered last week either in London or in any of the 32 large provincial towns; and no case of small-pox was under treatment in any of the Metropolitan Asylums hospitals on Saturday last, Nov. 17th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 2728, against numbers increasing from 1703 to 2702 on the 11 preceding Saturdays; 231 new cases were admitted during the week, against 320, 336, and 289 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had risen from 164 to 307 in the six preceding weeks, further increased last week to 352, but were 60 below the corrected average. The causes of 42, or 1·1 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Bradford, Newcastle, and 14 other smaller towns. The largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Blackburn, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·6, 19·6, and 19·2 per 1000 in the three preceding weeks, rose again to 19·9 during the week ending Nov. 17th, and showed an excess of 2·3 per 1000 over the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 14·9 in Dundee and 17·2 in Leith to 20·5 in Edinburgh and 21·2 in Glasgow. The 614 deaths in these towns included 22 which were referred to whooping-cough, 16 to diarrhœa, 13 to measles, 11 to diphtheria, seven to "fever," four to scarlet fever, and two to small-pox. In all, 75 deaths resulted from these principal zymotic diseases, against 77 and 62 in the two preceding weeks. These 75 deaths were equal to an annual rate of 2·4 per 1000, which was 0·8 above the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of whooping-cough, which had increased from 13 to 22 in the five preceding weeks, were again 22 last week, and included 17 in Glasgow, two in Dundee, and two in Paisley. The deaths from diarrhœa, which had decreased from 53 to 17 in the six preceding weeks, further declined last week to 16, of which seven occurred in Glasgow, four in Dundee, and three in Aberdeen. The fatal cases of measles, which had been eight and five in the two preceding weeks, rose again to 13 last week, and included eight in Edinburgh and four in Aberdeen. The deaths from diphtheria, which had been seven in each of the two preceding weeks, increased last week to 11, of which five were registered in Glasgow, three in Edinburgh, and two in Perth. The seven fatal cases of "fever" corresponded with the number in the preceding week, and included six in Glasgow. The deaths from scarlet fever, which had declined from eight to four in the three preceding weeks, were again four last week, and included two in Glasgow and two in Paisley. The two fatal cases of small-pox were both recorded in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had increased from 98 to 150 in the six preceding weeks, further rose last week to 163, and were 31 above the number in the corresponding period of last year. The causes of 21, or more than 3 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 20·0, 21·9, and 22·5 per 1000 in the three preceding weeks, further rose to 26·0 during the week ending Nov. 17th. During the past four weeks the death-rate in the city has averaged 22·6 per 1000, the rate during the same period being 16·7 in London and 17·3 in Edinburgh. The 174 deaths belonging to Dublin registered during the week under notice were 23 above the number in the preceding week, and included 11 which were referred to the principal zymotic diseases, against 13 and 11 in the two preceding weeks; of these, three resulted from "fever," three from diarrhœa, two from whooping-cough, one from measles, one from scarlet fever, and one from diphtheria. These 11 deaths were equal to an annual rate of 1·6 per 1000, the zymotic death-rate during the same period being 1·2 in London and 2·6 in Edinburgh. The deaths referred to different forms of "fever," which had been three and four in the two preceding weeks, declined again to three last week. The fatal cases of diarrhœa, which had been five and six in the two preceding weeks, declined last week to three. The 174 deaths in Dublin last week included 25 of infants under one year of age and 61 of persons aged upwards of 60 years; the deaths of infants showed a decline, while those of elderly persons considerably exceeded the number in the preceding week. Eight inquest cases and six deaths from violence were registered, and 44, or more than one-fourth, of the deaths occurred in public institutions. The causes of seven, or more than 4 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

Fleet Surgeon A. G. Delmege is granted the honorary rank of Deputy Inspector-General of Hospitals.

The following appointments are notified:—Fleet Surgeon A. McKinlay to the *Camperdown*. Staff Surgeons: R. F. Bowie to the *Howe*; J. H. Thomas to the *Cormorant* for Gibraltar Hospital; and G. T. Broatch to the *Devastation*. Surgeons: J. M. G. Swainson to the *Terrible*; A. J. Hewitt to the *Trafalgar*; E. Folliott to the *Assaye*; and R. St. G. S. Bond to the *Highflyer*.

IMPERIAL YEOMANRY.

Private Lewis Johnstone Weatherbe to be Medical Officer with the temporary rank of Captain.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel Raglan Wykeham Barnes retires on retired pay. Lieutenant-Colonel John J. Falvey retires on retired pay.

Captain W. A. Ward joins the Home District for duty in London. Major J. H. Nicolas is selected for duty in the Southern District at Gosport. Lieutenant Carr is detailed as medical officer for the Royal Artillery Brigade Division at the new Ewshot Hut Barracks.

INDIA AND THE INDIAN MEDICAL SERVICES.

Colonel Davis, C.B., D.S.O., is appointed Principal Medical Officer, British Contingent, China Expeditionary Forces, vice Colonel Bookey, invalided.

VOLUNTEER CORPS.

Royal Engineers: 1st Cheshire: Surgeon-Lieutenant J. F. Blake-Campbell resigns his commission. *Rifle:* 1st Volunteer Battalion the Buffs (East Kent Regiment): Charles Mason Atkinson to be Surgeon-Lieutenant. 1st Volunteer Battalion the Hampshire Regiment: Douglas Lawson Thomson to be Surgeon-Lieutenant.

VOLUNTEER MEDICAL STAFF CORPS.

The Manchester Companies: Supernumerary Surgeon-Lieutenant. J. W Smith to be Surgeon-Lieutenant on the Establishment.

TRANSVAAL WAR NOTES.

Civil Surgeon J. B. Christopherson has returned to England.

Lieutenant W. Jagger, R.A.M.C., and Civil Surgeons W. L. Wainwright, L. V. Cargill, and W. C. Allan are returning home in the *Assaye*, which left for England on Nov. 17th. The following invalids are also on board:—Major T. Archer, R.A.M.C., Lieutenant F. S. Walker, R.A.M.C., and Civil Surgeon D. V. M. Adams.

Civil Surgeons R. Ward, A. Breslin, C. Gibbs, H. J. Scharlieb, and W. W. Woolliscroft left in the *Yorkshire* for England on Nov. 15th.

The hospital ship *Princess of Wales* sailed for England on Nov. 13th with 171 sick and wounded on board. She is due at Southampton on Dec. 5th or 6th.

The *Dilwara* arrived at Southampton on Nov. 20th with the following invalid officers on board:—Civil Surgeons F. D. Boyd, A. H. Watt, G. L. Chiene, J. Miller, J. McFarlane, G. S. Stoker, Coleman, and J. C. Ponder; Dressers A. C. Balfour, H. V. Fletcher, H. Gribben, W. H. Nutt, G. Paulin, Edwards, Thomson, McIlwain, and Stewart; Civil Surgeons Enrys and Roberts, of the Welsh Hospital; and Sir W. Thomson, of the Irish Hospital.

Major C. E. Faunce, R.A.M.C., Captain F. J. Wade-Brown, Civil Surgeons H. Bayliss, N. B. Harman, and H. B. Maunsell have been discharged from hospital to duty.

Sir William Thomson and the members of the staff of Lord Iveagh's Irish Hospital arrived in Dublin on Wednesday morning, Nov. 21st, and were received with warmhearted enthusiasm.

ARMY REORGANISATION AND REFORMS.

There is naturally a considerable amount of curiosity as to what may be the nature and extent of the coming army reform in which the Army Medical Service will, of course, share. But it is a question which concerns the whole army and not merely the medical branch of it, and is a big business. The changes will require to be far-reaching and radical if they are to satisfy the public mind in its present temper. Mr. Brodrick, the new Secretary of State for War, made a judicious and well-balanced speech at Godalming on Nov. 6th. He has already had much War Office experience and as he will be intimately associated with Lord Roberts, who will take up his appointment at the Horse Guards fresh from the South African campaign, to say nothing of all his previous war experience, we may expect that the reforms and reorganisation will at any rate be run on safe and practical lines. Sir Michael Hicks-Beach's recent speech at Bristol from the Treasury point of view struck us as a logical vindication of his position and a trenchant criticism and reply to much of what has been put forward from the purely military side. He had no difficulty in showing that our military system requires a change in several directions in order to bring it abreast of the requirements of the Empire and those of modern warfare and that something more than the expenditure of money is necessary.

THE WAR IN SOUTH AFRICA.

We may direct attention to the interesting articles by Mr. Charles Stonham appearing in THE LANCET as illustrating the great topographical difficulties of a campaign in South Africa. From his descriptions it will be seen that our troops with their hospitals and hospital establishments have had to make most laborious marches and to fight physical geography as well as the enemy. The events in South Africa carry us back to the long and successful defiance of the French arms in La Vendée and, more recently, to the formidable nature of the task undertaken by the Austrians in their occupation of Bosnia and Herzegovina.

THE CITY IMPERIAL VOLUNTEERS.

The members of the Volunteer Ambulance School of Instruction received Surgeon-Major R. R. Sleman, who went to the front in medical charge of the C.I.V., on Saturday last at their headquarters. In reply to an address of welcome he remarked that the result of inoculation for enteric fever had proved very satisfactory, for there were 50 per cent. more recoveries among men so treated than among the others. Surgeon-Major Sleman A.M.R., C.I.V., and also Surgeon-Captain E. W. St. V. Ryan, A.M.R., C.I.V., will be entertained at dinner this (Friday) evening at the Café Florence by the staff of the school.

THE HEALTH OF THE TROOPS IN SOUTH AFRICA.

The troops in South Africa are on the whole healthy. There is, nevertheless, as might be expected under the circumstances, a good deal of disease incidental to camp life and campaigning present among them. The amount of enteric fever, which may be said to be endemic in South Africa, is very much less than it was, but if the prevalence of that fever comports itself in the way that it does in India we may expect more of it during the hot season and after the rains.

Correspondence.

"Audi alteram partem."

THE CORONER AND THE DEATHS OF LUNATICS IN POOR-LAW INSTITUTIONS: A VALUABLE REFORM.

To the Editors of THE LANCET.

SIRS,—Some years ago I drew the attention of the Lunacy Commissioners to the fact that no provision was made for notifying to the coroner the death of any lunatic in Poor-law institutions, and in December, 1899, I again called attention to the matter. In reply I was informed that a workhouse, hospital, or infirmary of a union under the management of the guardians did not come within the definition of "an institution for lunatics" under the Lunacy Acts. In consequence, I brought the matter before the Coroners' Society, and by direction communicated with the Home Office, pointing out the desirability of such deaths being reported to the coroner, as is done in all asylums and houses licensed for the reception of lunatics.

The Local Government Board have now issued a General Order, of which I enclose a copy. By it you will see that the death of any person of unsound mind under the care of any

Poor law board must be reported to the coroner in like manner as lunatics, and that the word "lunatic" means "an idiot or person of unsound mind." The particulars to be furnished to the coroner are similar to those given by the authorities at asylums or licensed houses.

This consummation of our efforts is highly satisfactory to the coroners themselves and, I should think, to the medical profession and the public generally. At times rumours are heard of ill-treatment of lunatics in Poor-law institutions, but formerly as the coroner had no notice of deaths he knew nothing as to particulars until too late for him to interfere. Now, however, coroners will be cognisant of all such deaths if the Order is properly carried out and he can make further inquiry and order an inquest if necessary before the body is buried. By the operation of this Order the Poor-law institutions which retain lunatics even temporarily will have to fall into line with those admirable institutions for the reception of lunatics under the county or borough authorities and in private licensed houses where strict supervision is given. Another public advantage is that friends or relatives having an alleged grievance can ask the coroner to hold an inquest, and though this may throw additional work on the coroner I cannot think that any one of us will shirk responsibility, for if the charge is unfounded the credit of the institutions will be established and if sustained a remedy may be suggested. As this is a matter of interest to the medical profession I venture to ask space for the publication of this letter and of the Order (or so much of it as you may think necessary).—I am, Sirs, yours faithfully.

A. BRAXTON HICKS,
Honorary Secretary of the Coroners' Society of England and Wales.
Lupus-street, Nov. 19th, 1900.

*** The Order will be found printed on p. 1528 of this issue.—ED. L.

"APPENDICITIS."

To the Editors of THE LANCET.

SIRS,—In addition to Sir Samuel Wilks's letter in your impression of Nov. 3rd I can affirm that in 1859 Mr. James Long (brother of the eminent classic George), in his course of lectures on surgery in Liverpool not only included diseases of the cæcum and inflammatio appendicis, but objected to the terms "cæcitis" and "appendicitis" as hybrid, slipshod words, and used the terms "typhlitis" and "perityphlitis" and commended their use.

I was Mr. Long's private pupil at the time, when he had been 22 years' lecturer on anatomy and eight on surgery, and I know he was in favour of early surgical "interference," or rather assistance. I am, Sirs, yours faithfully,

Brook-street, W., Nov. 20th, 1900. TOM BIRD.

THE LATE WILLIAM ANDERSON, F.R.C.S.

To the Editors of THE LANCET.

SIRS,—As an old St. Thomas's man who has had the advantage and privilege of association with the late Mr. Anderson, first as a pupil and afterwards as a friend, I venture to trespass upon your space to invite old St. Thomas's men who have had a similar happy experience of his teaching and generous sympathy to show their appreciation of it by coöperating with me in perpetuating his memory in the hospital where he has been such a conspicuous figure as teacher and friend. Any attempt at laudatory commendation would be superfluous. His life is so well known to St. Thomas's men that I feel certain there are many who will gladly avail themselves of any opportunity that may offer to secure such recognition of his services as would be acceptable to the hospital and gratifying to his friends. I shall be glad to help in any way and will readily respond to anyone who may wish to join in this effort.

I am, Sirs, yours faithfully,
W. GIBSON BOTT.
37, Kennington Park-road, S.E., Nov. 20th, 1900.

"THE TREATMENT OF SPRAINS AND OF SOME FRACTURES."

To the Editors of THE LANCET.

SIRS,—I have read Mr. A. H. Tubby's address on sprains and fractures with much interest, and, though it contains nothing particularly novel, it is well that good rules of practice should be insisted on. I quite agree with Mr. Tubby that the only proper time for the use of cold applications in cases of sprain is immediately after the accident, but unfortunately the surgeon does not usually see these cases in the first quarter of an hour, and later warm applications are better. But I am surprised that Mr. Tubby entirely ignores the application of adhesive plaster to sprains, and I think he will find that strips of the American indiarubber plaster, carefully applied, give better results than a bandage with cotton-wool beneath it. The use of plaster-of-Paris can seldom be required in cases of sprain and has the disadvantage of causing stiffness which requires a good deal of massage, or possibly forcible movement, for its relief.

It is, however, the second part of the address which is most important, and I am glad to find the treatment of injuries about the elbow without splints inculcated. I have practised this method for many years, and in THE LANCET of Jan. 12th, 1889, I published a clinical lecture in which I say: "I believe that in all cases of fracture of the lower end of the humerus the elbow should be well bent. I include, of course, cases of separation of the lower epiphysis, and I like to bring the forearm thoroughly up so as to put the hand to the opposite shoulder, and then I feel confident that the fragments will fall into the best position." I have seen such terrible results from treating these fractures with rectangular splints, and particularly splints made of flat boards, so that the elbow and arm are tightly compressed when the inevitable swelling occurs, that I venture to emphasise Mr. Tubby's excellent teaching and to give the credit of it to Mr. Jonathan Hutchinson, from whom I learnt it.

I am disappointed not to learn Mr. Tubby's method of treating fracture of the olecranon, which he apparently ignores. In 1883 I read a paper before the Surgical Section of the British Medical Association at Liverpool, urging that in cases of fractured olecranon the elbow should be bent to a right angle and the forearm carried in an ordinary sling. I have always treated these cases in this way with the best results and I have seen disastrous consequences from keeping the limb straight, to say nothing of the discomfort to the patient during the treatment. I may add that I have never had occasion to wire a fractured olecranon.

I am, Sirs, yours faithfully,
Cavendish-square, W., Nov. 18th, 1900. CHRISTOPHER HEATH.

THE IMPROPER USE OF ASYLUMS FOR THE INSANE.

To the Editors of THE LANCET.

SIRS,—Could you help in a matter that calls for a thorough change of plan? Lunatic asylums are built for the insane; delirium tremens is a passing madness only, and is recoverable from by the rigid withdrawal of the exciting cause. Clearly the Act never contemplated the treatment of such afflicted persons as lunatics. Among the poor, if the boards of guardians cannot take such cases in and put them under proper restraint, we, certifying magistrates, are constrained to send these poor people to asylums. They get rapidly well and are yet prejudiced as to future employment by the fact that they have been lately under asylum treatment, and so the drink craze is bound to resume its sway, recrudescent as it is from idleness and low spirits and lack of food. Thus the mode of cure makes sure of the renewal of the disease: surely a sad irony on modern methods.

I am, Sirs, yours faithfully,
GEORGE H. R. DABBS, M.D. Aberd.
Shanklin, I.W., Nov. 16th, 1900.

"THE WEDGE OPERATION FOR ENTROPION AND TRICHIASIS."

To the Editors of THE LANCET.

SIRS,—With regard to an article under the above heading appearing in THE LANCET of Nov. 3rd, 1900 (p. 1269), I wish to call your attention to the fact that a modification of Snellen's operation has been constantly advocated and practised by Mr. W. E. Cant, of the British Ophthalmic Hospital in Jerusalem, for many years past, differing in no essential detail from that described under the above heading. Personally I have only used it in 300 or 400 cases, but Mr. Cant has used it in a large number (probably 7000) of cases. It is also used by men working in Palestine who have seen the modified Snellen's operation done in

Jerusalem by him. If the incision is continued through the conjunctiva no harm results and a very good result is got, but this should only be done in healthy lids. Sutures to bring the skin together need never be used and in almost all cases a linear scar results which is often indiscernible in two or three years. The cases in which the operation as above described is contra-indicated are those in which much skin has already been removed by native practitioners or quacks (generally with scissors). In such there may be failure to close the lids without strong effort, and the cornea is exposed during sleep. In these cases the operation tends to exaggerate this defect. For these I believe Van Millingen's operation to be by far the best available, because the latter lengthens the lid slightly. Only last summer I saw many cases in the north of Palestine where failure to close the lids after quack operations had resulted in partial, if not complete, xerosis corneæ, and others in which failure to close the lids during sleep would probably result in this.—I am, Sirs, yours faithfully,

J. CROPPER, M.A., M.B., B.C. Cantab.,
Late of Acre, Palestine.

Chepstow, Nov. 7th, 1900.

*** Surgeon-Major Herbert's method of operation has been practised by him for many years. The cases refer to the year 1895. We regret that we did not make this clear.—ED. L.

"NECROPSIES IN MEDICO-LEGAL CASES."

To the Editors of THE LANCET.

SIRS,—I have read with interest the leading article in THE LANCET of Nov. 10th (p. 1357) in which you refer to the importance of making a complete post-mortem examination in medico-legal cases. With your remarks I most fully concur, and my object in writing this letter is to accentuate a point which arises in connexion with the last case referred to in your article—viz., the importance of examining the cervical vertebræ. Fracture or dislocation of the neck as a result of violence is by no means so rare as might be supposed and these conditions not infrequently exist without any external signs of injury or, indeed, any indication that death has resulted from other than natural causes, and are therefore easily overlooked unless the vertebræ are subjected to careful examination.

Two instances illustrating this fact have recently come under my notice—one in which a man drawing a barrow slipped and the contents, weighing about 1 cwt., fell upon the back of his head and shoulders, and the other the case of a man who was found dead at the bottom of a short flight of stairs. In neither instance was there any external sign of injury; in both there were pathological conditions of the heart which *might* have accounted for death, but in both the examination of the neck in the manner I am about to describe, which should form part of the routine procedure in all post-mortem examinations, led to the discovery of the true cause of death. The procedure, which is well known, consists in extending the mesial incision on the anterior aspect of the body to a point immediately below the symphysis menti and then reflecting the skin for a short distance on either side of the neck. The knife is then passed up close to the lower jaw and the attachments of the tongue to the floor of the mouth are divided. The tip of the tongue is hooked down by the left forefinger until it can be firmly grasped and pulled downwards, while with the right hand the knife is passed boldly backwards, dividing the soft palate and tissues of the posterior pharyngeal wall. The whole of the soft structures in the neck, including the soft palate, tonsils, and fauces, are now easily brought down into view and one or two cuts with the knife serve to separate them completely from their position in front of the cervical vertebræ.

The advantages of the above procedure being followed in every case are two-fold: first, it is the only way in which the condition of the upper air-passages, pharynx, and tonsils, can be properly examined; and, secondly, I venture to maintain that in no other way can the presence of any fracture or dislocation of the cervical vertebræ be clearly made out. The first proposition everyone will agree with, although my experience is that this method of examination is frequently neglected or imperfectly carried out, with the result that such causes of death as œdema glottidis, or accidental suffocation from choking, more especially in young infants, are often overlooked. With reference to the second proposition, everyone who has made the attempt must be aware of the difficulty of speaking definitely as to the presence or absence of fracture the cervical vertebræ from mere manipulation of the head and neck, more especially when rigor mortis is present; in fact, it is impossible, as a rule, to give a definite opinion upon the point. If, however, the cervical vertebræ have been exposed in the manner described, then by placing one hand on their anterior surfaces and moving the head with the other hand, or, better still, placing the finger in the foramen magnum after removal of the skull-cap and brain, any abnormality can be detected with ease and certainty.

My excuse for writing upon a matter which may appear trivial is your article, and the fact that, notwithstanding the well-known rule that all post-mortem examinations in cases of sudden or violent death should be full and complete, the structures and organs of the neck are frequently totally neglected or only imperfectly examined; whereas, if the parts were exposed in the manner indicated as a matter of routine in all post-mortem examinations such an oversight as the one mentioned by you could never take place, while not a few apparently mysterious deaths would be satisfactorily explained. A point also of considerable practical importance is that no greater disfigurement of a body is occasioned than in a less complete examination.

I am, Sirs, yours faithfully,
HARVEY LITTLEJOHN.

Surgeon's Hall, Edinburgh, Nov. 19th, 1900.

"THE MICRO-ORGANISMS OF VACCINE MATERIALS."

To the Editors of THE LANCET.

SIRS,—I have read with interest in THE LANCET of Nov. 17th (p. 1414) an article by Dr. J. B. Buist on the subject of vaccine organisms, in which he refers to certain observations made by him with my assistance some 15 years ago. I wish it to be generally understood that although my name has been freely made use of in his book (1885) and also in his present paper above cited, I entirely dissociate myself from the conclusions at which he appears to have arrived. To say that a *spore* is the *contagium vivum* of vaccinia is simply a confession of defeat in his very noble effort to clear up an awkward pathological problem. Every bacteriologist should know that a spore—i.e., the immature ovum of any *contagium vivum*—is not to be looked upon as a definite cause of disease. It is only as one follows the life-history of such a spore through its subsequent developments that one is able to assign to it its pathogenetic rôle, and it is only matter of regret that in his paper Dr. Buist has neglected to take this sequence into his consideration. His paper is of so much interest and importance that one must venture to re-assert the well-known dictum that *like produces like*. That a torula should give birth to micrococci, that they in turn should be spores of bacilli and may be fat or lean according to nutrition and environment, and in sequence give birth to one or other type of micro-organism, is a theory not supported by exact research and one so chimerical as to make exact research appear at a disadvantage. Having taken part in Dr. Buist's research to the extent he mentions, and having absolutely declined to associate myself in his book (*op. cit.*, 1885). I think it is now my duty to dissociate myself from the views expressed in his paper in your last issue.

I have no doubt that an artificial nutrient medium for the development of vaccine lymph will soon be introduced; and if it can be standardised, as so many drugs have lately been standardised, for medicinal use, so much the better. There ought to be little trouble in this matter, and the result should strengthen the hands of the Local Government Board in insisting upon vaccination of a uniform type, and supported by irrefragable scientific evidence of unquestioned authority. I must leave the further discussion of this matter to the specialists who can scarcely fail to realise its importance at the present juncture.

I am, Sirs, yours faithfully,
ARTHUR W. HARE, M.B., F.R.C.S. Edin.

Newquay, Cornwall, Nov. 19th, 1900.

"THE QUESTION OF THE COMMUNION CUP."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Oct. 13th reference is made in an annotation to "intinction" as a sanitary substitute for individual or separate communion cups; the latter, suggested

by a correspondent in the same issue, are dismissed rather summarily as impracticable. Regarding the revival of the former method of celebrating the Lord's Supper I agree that the sanitary reasons for the change are both patent and cogent, although it is not unlikely that there will arise many ecclesiastical or dogmatic objections to the change from many quarters. But the reason for advocating intinction that THE LANCET gives—namely, that individual communion cups are not practicable—is valid or not according to whether the subject is viewed from the sacerdotal or sanitary standpoint

If THE LANCET means that individual communion cups are impracticable in the Church of England because of certain doctrines, or because of the ritual, "high" or "low," that may obtain, then I have no protestation to make; the advocates of this sanitary reform do not urge any body of the Christian Church to relinquish any beliefs that it considers vital and dear to its spiritual serenity or moral conduct, and holding which it believes would be jeopardised by substituting individual for the commonly-used communion cups. But if THE LANCET means that individual cups are not feasible from a purely sanitary point of view, then it is very mistaken, permit me to urge. Furthermore, though admittedly a "modern" innovation, that has not made it necessarily difficult of adaptation—here in America at least; nor has any church found that it introduced "complications into a rite" or rendered the service of the ordinance less "dignified, solemn, and reverent."

Individual communion cups have come increasingly into use during the past six years, and I have yet to learn of one church that, having adopted them, would under any consideration use the single or several cups again. Hundreds of churches are constantly demonstrating the individual cups to be not only practicable but practical—clean, safe, expedient, and reverent to use. I have recently canvassed to find out about how many are now using these cups. It is difficult to learn of all, but I have at this time collected 732 churches, distributed throughout the United States (in all but three or four States) and in all of the principal denominations. The majority of these churches are in the eastern and middle western states, and in the Baptist, Congregational, and Presbyterian churches, the Reformed, Lutheran, and Methodist Episcopal churches being next in order, the Protestant Episcopal (sister to the Church of England) and Universalist churches having separate cups being fewest in number. I have reason to believe that there are approximately 800 churches now using the cups throughout Christendom, about four times as many as in 1897, and representing nearly half a million communicants—evidence of wholesome substantial progress.

Whatever the method of avoiding the unclean, unsanitary single chalice, it is gratifying to note the increased interest and moral courage being shown in desiring the proper union in performance as well as in promise of cleanliness with godliness at the Lord's table as well as at our home table.

I am, Sirs, yours faithfully,

Philadelphia, Nov. 9th, 1900. HOWARD S. ANDERS.

THE ROYAL ARMY MEDICAL CORPS "AS SEEN FROM WITHIN" BY A VOLUNTEER SURGEON-CAPTAIN TEMPORARILY ATTACHED R.A.M.C.

To the Editors of THE LANCET.

SIRS,—I have had the privilege of six months' service with the Royal Army Medical Corps, both at home (Aldershot and Cowshott) and in Cape Town and Pretoria and neighbourhood during the present Transvaal War, and after 16 years as a private practitioner may be allowed to express my opinion on this important establishment of Her Majesty's army. The work done by this corps can only take a first place, in my opinion, among the other branches of the service. In point of fact, I doubt whether any other corps can excel in the work effectively achieved by them during this dire war.

As a plain volunteer officer who has been temporarily attached to the army and has worked hand-in-hand with the military surgeon and has studied his daily routine I claim the right to give expression to my views in the matter of the corps' usefulness, competency, or otherwise. I consider the medical service a model of what is expected in any modern army and doubt whether any other army could show better results, especially after strict trial, as has been the case with us in the present struggle. Several improvements might advantageously be forthcoming and will in all probability occur sooner or later, but up to the present, as far as I can find, no definite action in this important matter has taken effect.

My suggestions are these and may meet with the approval of many military and civil surgeons:—1. Retain the military titles, which are necessary for obvious reasons. 2. In *military matters* have undoubtedly *military discipline*: for example, a superior officer should certainly have power to order his junior officer to attend a certain case or cases at any time or place or to give any order for any other medical purpose he chooses; but (3) in *medical matters* there should be substituted *medical etiquette*. I deny the right of any medical officer senior to the officer in attendance to interfere with the care and treatment of any case under the latter's charge. Every medical officer in the army should be responsible to Government and to Government alone for the care of his sick and wounded and if found incompetent should be discharged the service. 4. There should be less "writing up" of diet sheets and report sheets; this takes up a considerable time of the army surgeon's work. 5. As to requisitioning for instruments and medicines, especially the former, the present practice is perfectly absurd: it causes unnecessary delay and is often responsible for the safety of a patient's existence. I hold that the protection of human life is one of the most sacred duties and any system which militates against this must be radically wrong.

As a cure to existing evils I would suggest:—1. Relieve the army medical officer of the vast amount of useless filling in of diet sheets which takes up his time to an extent so as to interfere greatly with his usefulness in his medical and surgical wards. 2. Arrange for a commission composed of prominent medical men who have had experience of professional work in time of war, and of officers of the Royal Army Medical Corps, who are not sufficiently long in the service to be influenced by "red-tapeism," and draw out some such scheme as here proposed and the army in the future will even be better doctored than at present.

I am, Sirs, yours faithfully,

FRANCIS WILLIAM GRANT, M.D., B.Sc. Edin.,
Surgeon-Captain, 1st Banff Volunteer Artillery,
Captain (temporary) R.A.M.C.

Elgin, N.B., Nov. 12th, 1900.

MEMORIAL TO THE LATE MR. G. J. SYMONS, F.R.S.

To the Editors of THE LANCET.

SIRS,—On May 31st a meeting was held at the rooms of the Royal Meteorological Society to consider the question of a memorial to the late Mr. G. J. Symons, F.R.S., the distinguished meteorologist and founder of the British Rainfall Organisation. It was resolved unanimously that the memorial should take the form of a gold medal to be awarded from time to time by the Council of the Royal Meteorological Society for distinguished work in connexion with meteorological science. An executive committee was appointed to take the necessary steps to raise a fund for that purpose. We have now much pleasure in stating that their appeal has been very heartily responded to, not only by meteorologists, engineers, and representatives of other branches of science and industry, but also by personal friends and admirers of the late Mr. Symons in all classes. The committee have decided to keep the list open until the end of January, 1901, in order to allow all who have in any way benefited by Mr. Symons's advice and assistance to contribute to the Memorial Fund.

We are, Sirs, yours faithfully,

C. THEODORE WILLIAMS, M.D., Treasurer.
R. MELDOLA, F.R.S., } Secretaries.
WM. MARRIOTT, }

70, Victoria-street, Westminster, S.W.

"SMOKE NUISANCE."

To the Editors of THE LANCET.

SIRS,—I take the liberty to send you under separate cover a copy of the *South London Press* of Nov. 3rd, 1900, in which you will find an account of the action taken by the Lambeth Vestry against the South London Electric Supply Corporation, for creating a nuisance by burning of street refuse, the complaint being: (1) the smoke; (2) the dust and ashes

blown into the gardens and houses; and (3) the stench arising from the combustion of the refuse.

The decision of the magistrate was that, on the Electric Supply Corporation giving an undertaking not to burn street refuse in future in their furnaces or to permit any effluvia to be emitted from their chimney, the judgment would be postponed *sine die*. The corporation having given this undertaking no fine was imposed, but should the nuisance be repeated the proceedings can always be re-opened. I may mention that the vestry of Lambeth summoned the corporation after having received a memorial signed by 10 householders, as demanded by Section 21 of the Public Health (London) Act. I think this result is very satisfactory, and if the communities in other parishes will take a lesson from this we may soon succeed in improving the air we breathe in London.

I am, Sirs, yours faithfully.

Nov. 3rd, 1900. L. R.

THE VESTRY OF CAMBERWELL AND THE ANTITOXIN TREATMENT OF DIPHTHERIA.

To the Editors of THE LANCET.

SIRS,—The late vestry of Camberwell, shortly before its death, published and circulated a leaflet, signed by the bacteriologist, concerning diphtheria and its treatment by antitoxin. After stating that antitoxin cures 99 per cent. of cases of diphtheria and that a single dose protects a healthy person from the disease for a month and making some other similar statements for which there does not seem sufficient warrant, he finishes up this remarkable document as follows: "About 70 of the doctors in the parish are using the remedy and having suspicious throats examined. If all would do the same there would not be one death where there are 20 now."

We must all admire zeal in the discharge of his duties on the part of a public official and of a public body, but we might expect the zeal to be tempered by discretion. The paragraph which I have quoted adds nothing to the value of the document and appears to me to be a gratuitous insult to the practitioners of the parish. I cannot imagine by what means this gentleman can discover whether his fellow practitioners are or are not using antitoxin. And finally he accuses them of causing the deaths of 19 out of every 20 cases of diphtheria. Personally I protest in the strongest manner against this language and consider that an apology should be offered to these gentlemen by the bacteriologist and the leaflets withdrawn from circulation.

I am, Sirs, yours faithfully,

Nov. 17th, 1900. CAMBERWELL.

*** The circular in question is before us. Like our correspondent we respect the zeal that has led to its issue, but we do not think it happily worded. It protests too much. Yet the good that it will do outweighs in our eyes the objections that may be taken to some of the statements on the ground of exaggeration.—ED. L.

A VISIT TO ROBBEN ISLAND.

(FROM A CORRESPONDENT.)

Robben Island Asylum.

ONE does not go to a war to get holidays, and yet I have managed to secure two, both of which were very enjoyable. On the first occasion I was escorted down a gold-mine at Johannesburg, and on the second I was conducted by Dr. Gregory, the medical officer of health of Cape Colony, to see the well-known asylum for the Cape lepers. My thanks are due, too, to Mr. Piers, the lay commissioner in charge of the island, to Dr. Black and to Dr. Mitchell, who showed me everything within their various domains. The early history of leprosy in South Africa is vague, but there are native traditions which tend to the belief that the scourge existed amongst the Hottentots before the white man discovered the Cape. It was, perhaps, introduced later among the Dutch settlers from the Dutch East Indies, whence their servants were procured. About the year 1817 there were so many lepers that the first asylum in South Africa was opened by the British who had been virtual rulers of Cape Colony since 1806. The spot selected, called "Heaven on Earth," was in the Caledon mountains, not very far from Cape Town, and it is interesting to note that this district still supplies a very large percentage of lepers.

In 1845 the patients were transferred from Hemel-en-Aarde to Robben Island, which takes its name from an old Dutch word for the seal. Whales must have been frequent neighbours of the island, for their remains are still used as palings and boundary marks there. The island, history tells us, was used as a quarantine station in 1803 and perhaps earlier; then criminal lunatics were confined there, and now there are 270 lunatics, 600 lepers, and 120 convicts. It was not till 1892 that the Leprosy Repression Act for compulsory segregation was brought in. The Ministers of that day feared that there would be opposition, but the friends of the lepers made no sign. The island is conveniently situated, being two miles long and half a mile wide, and is distant six miles from Cape Town. Yet this stretch of sea, which takes less than an hour to cross in a steam-tug, is considered by the Kaffirs a great drawback. Moreover, they complain of the loneliness of the island, forgetting that any compulsory leper asylum must be equally irksome to the inmates. The statement that the island is barren and ugly may be true of some months of the year but it is certainly not the case in September, when the fields are rich with lovely arum lilies growing as weeds. However that may be, the sentimentalists in the House of Assembly have carried the day and a promise has been given to the lepers that they shall have an asylum built for them on the mainland. As a consequence of this no improvements are being carried out in the leper quarters, which is, perhaps, the chief reason why they look neglected and forlorn. The numbers include 360 males and 240 females, mostly Kaffirs, with a few separate huts for the Dutch. There are now no inmates of English birth. These figures include the lepers of the Orange River Colony who were prevented by the war from being moved to a new asylum which had been built for them at Bloemfontein. The Kaffir male and female compounds are separated by high barbed fences and palings, which are not always sufficient to prevent illicit flirtations among the lepers who greatly resent being deprived of the society of the other sex. The island is rich in churches and Sunday services for the lepers are held in English, Dutch, and Kaffir. The sanitary arrangements seem to be as perfect as could be expected, but there are two or three obvious blots which might be remedied. The institutions on the island are not directly under the control of the sanitary department of the colony—i.e., the medical officer of health—though they may be theoretically so. Then there is no regular supervision of either lepers or lunatics by independent experts, so that there is no one beyond the medical officers on the island to decide whether a patient should be released or detained indefinitely. Perhaps the evil which appealed most to me was that I saw the non-leprous children of leper women living with dozens of lepers with no attempt made to isolate them from the danger of their surroundings and no care taken of their education. This has been strongly reported upon by the medical superintendent in his annual statements and ought at once to be ended. The case could easily be met by putting a schoolmistress in a cottage on the island where a kindergarten could be started and where the leper mothers might be allowed under strict regulations to see their children every week. Much good work is being done by the medical men in charge of the lepers. Photographs are taken of all of them, microscopical and bacteriological work is carried on, and there are every year some 60 post-mortem examinations made. Two-thirds of the lepers are of the anæsthetic type and they usually die from pulmonary tuberculosis, while the remaining third are either nodular or mixed lepers, and they die from kidney and liver infection. If compulsory asylums are justifiable it is obvious that cases of nodular leprosy and mixed leprosy must be isolated; but are anæsthetic patients equally dangerous to the community? Dr. Black and Dr. Kolle systematically examined the nasal discharge of the anæsthetic cases with the result that leprous bacilli were found in the noses of several old-standing cases which were apparently quite quiescent. This more accurate and modern method of examination may cause several cases to be re-considered which had been thought to be entirely arrested.

Lunatic Asylums.

Money is much wanted to supply separate accommodation for the lunatics, for at present criminals, paupers, and

paying patients all want sorting badly. In one airing court I saw a European dangerous patient with the native lunatics, because the other Europeans were afraid to have him with them. Among other acts of violence he had succeeded lately in fracturing the thigh of the head attendant during a struggle. Last year a female patient while out walking with two nurses and some other patients suddenly broke loose from them and sprang over the rocks into the sea. One of the boatmen swam out through a heavy sea and brought the patient to a rock, but she was swept out of his grasp by the surf and drowned. I understand this is a very exceptional occurrence.

Emjanyana Leper Asylum.

This is the only other leper establishment in Cape Colony, and, with the exception of one in Pretoria, the only other in South Africa. The numbers vary from 250 to 300, the two sexes being divided pretty equally. Here again, there are confined a few non-leprous children who have either been admitted with their leper mothers or have been born in the wards of women admitted while in a state of pregnancy. Two years ago 12 male lepers and four female lepers effected their escape in spite of a guard of the Cape Mounted Rifles. On the day after the escape the dormitories were carefully searched and a number of sticks, stones, knives, and pieces of sharpened iron were found secreted in the bedding. The ringleaders confessed that they had intended to use force to obtain their escape. The lepers are satisfied with their diet and medical treatment, but they believe that they are wrongfully detained after being cured and they abhor the strict separation of the sexes. Lately there has been no outbreak among the patients.

Cape Town, September.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Plague and Cholera in India.

THE increase in the plague mortality throughout India which I have had to record during the past few weeks seems temporarily arrested, only 2123 deaths having occurred during the past week in India against 2136 in the previous seven days. There were fewer deaths in Calcutta (88 against 101) and in the Bombay district (1142 against 1215). In Mysore, however, the number of deaths continues to rise, the returns showing 765 deaths this week compared with 696 last week, the total for the outbreak being 28,734 cases and 23,186 deaths. Two cases of plague have occurred in the Royal Artillery at Bangalore, and a third case is reported as suspicious. The disease is rapidly making headway in Poona, 95 deaths having occurred yesterday (Oct. 10th). Two cases have occurred in the Cantonment amongst persons inoculated last year, but amongst the 7688 inoculated this year not one case has so far occurred. Plague is reported to have reappeared in the Hischiapur district of the Punjab but only a few cases have up to the present been noted. Plague has within the last few days broken out in epidemic form at Patna. In this crowded city therefore a much more serious development than occurred before (February) may be expected. This early recurrence within eight months is particularly interesting because it is similar in time to the first recurrence of plague in Poona in 1897, whereas Bombay, Calcutta, and other places have for the most part had an interval of about a year.

The health of Calcutta since the floods in the third week of September has been very bad. Although the mortality is declining it is still very high. The increase of deaths is almost confined to the suburban or added areas of the city, the districts to the east and south of the city. These areas are undrained, low-lying, and naturally swampy, and were most affected by the rains. During the past fortnight while the normal mortality would be 812 the deaths have been 1872. Plague is apparently on the increase. Cholera, diarrhœa, dysentery, and the direct effects of exposure explain the chief excess since the heavy rains.

The health of Bombay, which has been so bad for many months, continues bad. The general mortality is slowly declining, but 947 deaths were registered last week against an average of less than 600. Plague deaths were numbered at 84, but the increase in the new cases and deaths during the past few days suggests that a further development is in progress. The figures to-day are about on a level with those of the same period last autumn.

Cholera still continues in some of the cantonments. A small outbreak is reported amongst the 4th Hussars at Secunderabad and amongst some native regiments at Meean Meer and Sialkot. In Kashmir this disease is still very virulent. Up to Oct. 7th there were 2157 deaths and in addition Srinagar had 821 deaths. There is no sign of the visitation falling off. In the Punjab also it is raging extensively, as for the week ending Sept. 22nd 914 cases were returned and the total cases (48,575) and deaths (25,115) have formed the heaviest cholera rôle since 1892.

Oct. 11th.

The Famine and Plague.—The Increase of Deaths from Phthisis in Bombay City.

In nearly every part of India the harvest promises to be a bumper one. The exceptions are the Deccan, Guzerat, and the Carnatic, where rain has been very deficient. The numbers on famine relief have now dropped to about 1,250 000 and nearly all these are in the Bombay Presidency, and chiefly in Guzerat. The relief works are closed in Madras, the North-west Provinces, and the Punjab.

Plague throughout India remains about the same. The chief places at present suffering are Poona, Nasik, Mysore, Belgaum, and Bangalore. At Poona the outbreak seems to have attained its height and has begun receding. In Mysore city the cases are still numerous. In Bombay city there is the same steady return of from 12 to 20 cases a day. The mortality of the city still keeps very high, having been 834 last week as compared with the five years' mean of 678. In Calcutta is to be noticed a sudden absence of the return of plague deaths. There has been a steady improvement of late in the general mortality and a decline in the numbers returned of plague deaths, but the sudden cessation of all plague deaths suggests that some change of policy in the returns has been inaugurated. Whereas previously we heard of suspicious deaths these also are not now published, so it can only be inferred that some order has gone forth that even the most highly suspicious deaths are not to be returned as plague. With the experience of the past two years one can hardly believe that this represents the true state of the city. Highly suspicious deaths we are told continue to occur, but living cases have latterly not come under observation. If this absence in the return of plague deaths be a change of policy such as was adopted in 1898, it is, to say the least, very misleading.

In a Government resolution recently published it is observed that there has been a remarkable increase since plague first appeared in Bombay in the number of patients suffering from phthisis at the large hospital. Whereas in 1896 there were 212 patients suffering from phthisis, in 1897 the numbers rose to 405, the following year they rose to 530, while in 1899 no less than 607 were admitted.

The municipal statistics of death registration during these plague years show similarly a large and steady increase in the deaths from phthisis and other pulmonary diseases. The health officer naturally attributes the increase to plague in some of its forms, but the surgeon-general considers that this explanation is inapplicable to the hospital cases and has arrived at the conclusion that there has been actually a great rise in the mortality from phthisis in Bombay city during recent years. The increase of the hospital figures is so remarkable (the cases and deaths from phthisis having nearly trebled) that one cannot but think that plague has had immense influence. It has been observed that phthisical subjects who survive an attack of plague show rapid decline afterwards. It is probable, therefore, that many of these phthisical subjects at the hospital may have had plague before admission. It is also extremely probable that many of them actually died from plague. The municipal returns of deaths from "other pulmonary diseases" covers a multitude of possible diseases, as the registration of anything like the correct cause of death in the majority of cases is extremely problematical. The inference of the health officer is perfectly legitimate and it is also probable that the whole of the excess mortality in Bombay city since plague first appeared may, with the exception of deaths due to certain other well-known and recognised epidemic diseases, be put down to plague.

Oct. 31st.

CARDIFF INFIRMARY.—At a meeting of the executive committee of the Cardiff Infirmary held on Nov. 14th it was stated that the adverse balance of the institution now amounted to £11,085.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The University of Birmingham.

THE founders of a new institution accept an enormous weight of responsibility and a vast amount of work in the pursuit of their object. This is clearly illustrated in the labour and energy involved in promoting the new University of Birmingham. The arrangement of the many new subjects of study involve much thought and careful consideration, while the multiplicity of details in working and the arrangements tax the time and the strength of all the chief promoters and their allies. The dean of the medical faculty (Professor B. C. A. Windle) has been indefatigable in looking after the interests of the school of medicine and ever ready in seeking to maintain its efficiency and high standard. Of late he has been actively engaged in the important task of arranging for the examinations for medical degrees to which practitioners of a certain standard will be admitted. Already a large number of practitioners have expressed a desire to submit themselves to the examinations, and it is expected that the number will be largely increased. This examination offers a healthy stimulus to revive the knowledge of former years by the additions of modern methods in order that the coveted degree may be obtained. Some of the classes show a goodly proportion of qualified men anxious to equip themselves for the ordeal. The dean is willing to give any information to applicants for particulars as to classes, text-books, and all details.

City Health Returns.

At this season of the year the returns of the Health Committee show much fluctuation, but unfortunately they exhibit a high relative increase of infectious diseases. For the week ending Nov. 10th the record showed that scarlet fever was increasing and typhoid fever was decreasing. Last week this order was reversed, scarlet fever having decreased from 80 to 60 cases and typhoid fever having increased from 25 to 38 cases. The epidemic is not so severe as in some seasons, for during the past week, of the total number of deaths registered only three had reference to scarlet fever and six to typhoid fever. Measles is credited with four deaths, the general death-rate being 18·3 per 1000. 484 cases of scarlet fever were under treatment at the hospital—a large number even in a large population. The Widal blood-test in cases of typhoid fever is recommended by the Health Committee, who have arranged to bear all expense in providing glass tubes and outfits for the purpose, in addition to the tests being conducted in the laboratory of the University.

South African Experience.

The Pathological and Clinical Section of the Birmingham Branch of the British Medical Association is ever ready through its active secretaries to excite interest in the work of the section. A meeting has been arranged for Nov. 30th at which Mr. Frederick Treves has kindly consented to give an address on Notes from a Field Hospital in South Africa. Birmingham has contributed well to the work done so nobly in this quarter—Mr. J. F. Hall-Edwards and Mr. C. A. Leedham-Green having been actively engaged in important duties. It is expected that a large audience will be present to give a hearty welcome to Mr. Treves.

Superstition still Existing.

A curious instance of superstition occurred lately in one of the suburbs of Birmingham. Two men were engaged in dragging the canal for a child's body. A small loaf of bread was placed in the water within a few yards from the men and it was stated that as soon as the loaf turned round they would be near the body. It is an old superstition in the Midlands that if a dead body is in the water and a loaf into which some quicksilver has been inserted is allowed to float about, it will stop over the spot where the body lies. It is hardly necessary to point out how entirely fallacious such an idea must be, and yet there are to be found those in this enlightened age who believe in the practice. It is, of course, well known that obstructions in running streams cause eddies, and these collect floating substances—light matters passing rapidly down on the surface; but a weighted object like a loaf of bread with quicksilver inside would sink nearly below the surface and would be caught by the undercurrent of the eddy caused by the corpse and so remain stationary. This possibly is the matter-of-fact explanation of an apparently occult phenomenon.

Nov. 20th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Hospital Saturday Fund.

THE annual meeting of the subscribers to the Hospital Saturday Fund was held recently under the presidency of the Lord Mayor (Mr. A. Crosthwaite). The treasurer's statement showed the amount collected to have been £7103 16*s.* 10*d.*, an increase of £83 1*s.* 1*d.* over the year 1899. Notwithstanding that the day appointed for the ladies' street collection was most unfavourable for the work, the result had been very satisfactory. Since 1890 the fund had increased by £3062 4*s.* 2*d.*, the return of that year being £4041 12*s.* 8*d.*, while the expenses, which were 8 per cent. in the former period now amounted to about 5 per cent. There were now in use 1695 boxes, 865 cards, and 131 firms who adopted their own system—an increase over 1899 of 67 boxes, 38 cards, and 16 firms using their own method—a total of 121 new collections commenced during the year. One feature of this branch of the report, to which the treasurer called special attention, was the increase in the number of firms working their own collections, and he would strongly recommend the adoption of that system where possible. During the year 122 notes of admissions to the various hospitals had been supplied through the office. The Hospital Saturday Fund was now represented upon the committees of all the hospitals to which contributions were made, and the representatives were unanimous in their testimony as to the very close attention given in any case of complaint or suggestion made to them by the committee. It is pleasing to find that the representatives of the fund on the various hospital committees speak in terms of praise both of the good work accomplished by the medical staffs and nurses in the several institutions and of the economical yet efficient manner in which these institutions are conducted.

The Central Hospital, Liscard.

A highly successful bazaar in aid of the funds for building the new central hospital at Liscard was concluded on Nov. 19th, the total amount realised being £5800. The committee of the hospital have much cause for congratulation, as the amount desired was only £4000.

Liverpool School of Tropical Medicine.

Dr. R. Fielding-Ould, Dr. C. Balfour Stewart, and Dr. A. S. F. Grünbaum have been appointed assistant lecturers in the Liverpool School of Tropical Medicine. These gentlemen have afforded much assistance to the school in many different ways, and it was felt by the committee that it would be of great advantage to the school to have their coöperation as official members of the teaching staff. In view of the return of the second malarial expedition from West Africa the following resolution was carried unanimously at the recent meeting of the committee:—

That the best thanks of the Liverpool School of Tropical Medicine are due to Dr. Annett, Dr. Dutton, and Dr. Elliot for their valuable services in West Africa whilst members of the second malarial expedition of the school; and, further, that the committee of the school desire heartily to congratulate the expedition on its safe return from its labours.

At the same meeting a resolution was passed thanking his Excellency Dr. J. Paes Carvalho, the Governor of the State of Pará, for the magnificent reception which he extended to the yellow fever expedition of the school on its arrival from Cuba and for the public-spirited manner in which he had interested himself in the success of the expedition.

Nov. 20th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Port Medical Superintendent of Dublin.

AT a meeting of the Port Sanitary Authority of Dublin held in the City Hall on Nov. 13th, Mr. Daniel Bergin presiding, it was decided to appoint Sir Charles Cameron to the office of Port Medical Superintendent at a salary of £50 a year.

Royal College of Surgeons in Ireland.

His Excellency the Lord Lieutenant, Lord Iveagh, and many other distinguished guests have already accepted invitations to be present at the dinner to be given on Nov. 24th by the Royal College of Surgeons in Ireland to welcome Sir William Thomson and the other members of the staff of the Irish Hospital home from South Africa. A telegram has been received from Sir William Thomson stating that the members of the staff reached Southampton on Nov. 20th, and would arrive in Dublin by the London and North-Western Railway Company's steamer *Cambria* at 7.30 A.M. on Nov. 21st.

Poor-law Medical Appointments in co. Down.

Dr. Charles O'Neill has been appointed medical superintendent officer of health for the Holywood district of co. Down. The district extends from the outskirts of Belfast, embracing Castlereagh, to Holywood, and the duties of the post are to report once a month to the Belfast Guardians, while once a month the officer will receive a report from each of the dispensary medical officers in the district. He will consult with these medical officers if any question of sanitary matters arises, and for this work the guardians propose to give him £8 per annum, he to pay his own travelling expenses. The other district is from Whiteabbey, embracing Ligoniel, to the Black Mountain at Dunmurry, and the guardians propose to pay the medical superintendent officer of health for this large area £10 per annum. In former times Dr. Seaton Reid did all the work and was paid £50 per annum; now the guardians make two appointments, for which they pay £8 and £10 respectively, which is but a miserable pittance for the work to be done. Of course, owing to the extension of the area of Belfast, part of the district formerly under the charge of the guardians has been taken into the city of Belfast, but still the remuneration proposed to be paid by the guardians to their two new health officers is wretchedly small and inadequate. It only shows to what Poor-law medical appointments in Ireland are coming.

The Housing of the Working-classes in Belfast.

Dr. Henry O'Neill, J.P., who went as a delegate from the City Council of Belfast to the late Sanitary Institute conference in London and the Tenth International Congress of Hygiene and Demography in Paris, has presented a report on "The Housing of the Working-classes" to the Public Health Committee of Belfast. Dr. O'Neill gives an account of discussions at the London conference on "Unhealthy Areas and Displacement of Town Populations," on "Improved Houses for Town-dwellers," and on "Improved Means of Communication." He also gives details of reports presented to the Paris Congress on "Industrial and Professional Hygiene: Insanitary Houses." Dr. O'Neill thinks that by a judicious application of the Housing of the Working-classes Act, 1890, and its amending Acts a very great improvement might be effected in more than one district of Belfast, and he puts forward a series of most useful recommendations for improving the hygiene of houses, streets, &c. He makes a practical suggestion (plan sbeing given) for a scheme to improve one of the most densely populated districts of old Belfast, an area bounded by King-street, Divis-street, Barrack-street, and College-square North, as well as for an open space at the junction of the Crumlin and Old Park-roads. Taking the year 1899, he says that of the population of Belfast—350,000 as calculated by the Registrar General—2117 persons died from preventable diseases—that is, because of disobedience to the ordinary laws of health. Dr. O'Neill has, as a result of great trouble and unceasing energy, now presented to the Belfast Public Health Committee three important reports on (1) "The Housing of the Working-classes"; (2) "The Inspection of Meat-supply"; and (3) "The Inspection of Milk-supply of Cities and Towns, and how the Supply of Meat and Milk is Controlled by Municipal Corporations so as to enable the citizens to obtain meat and pure milk." With the Public Health Committee, therefore, further action as to these reports now rests.

Londonderry Infirmary.

The medical appointments under the new scheme for the regulation of this institution were made on Nov. 15th. In former times there was one extern medical attendant (physician and surgeon combined); now there are to be two surgeons and two physicians and an intern house surgeon. Mr. Joseph Byrne, M.R.C.P., F.R.C.S. Irel., and Mr. J. E. Miller, M.B., B.Ch. Dub., have been appointed the new surgeons, and Mr. Thomas MacLaughlin, L.R.C.P., L.R.C.S. Edin., and Mr. Walter Bernard, F.R.C.P. Irel., M.R.C.S. Eng., were elected as physicians. Mr. J. G. Cooke, M.B., B.Ch. Dub., was reappointed resident medical officer. There is a strong feeling that in all the county infirmaries of Ireland it is far too narrow a policy to have only one extern medical officer. There should be at least two, one a physician and the other a surgeon. Londonderry is to be congratulated on having led the van in a very necessary reform, and on having broken through the narrow policy of past ages.

Donegal Lunatic Asylum.

At the monthly meeting of the governors of this institution, held in Letterkenny on Nov. 15th it was reported that the number of male patients had increased from 365 to 388 since the staff was last increased, and on the female side from 185 to 206. Both sides of the house were overcrowded. It is proposed that there should be an increase of two male and two female attendants.

A Herbalist's Plaster.

An inquest was held by the Belfast city coroner on Nov. 15th, in reference to the death of a female, aged 35 years. It would appear that the woman suffered from lupus of the nose. She had been operated on at the Royal Victoria Hospital, but the sore had not healed and a herbalist on Oct. 25th put a plaster on the nose, for which he was paid 5*s.* by the woman's husband. The woman had to go to bed on Oct. 26th and died on Nov. 2nd (no medical man having seen her). She had previously complained of headache and "pains in her inside." The post-mortem evidence was to the effect that the nose was in a state of acute inflammation, but that the cause of death was heart disease, death being accelerated by the depression produced by the pain of the arsenical plaster. The jury found that the woman died from heart disease, and that her death was accelerated by the application of an arsenical plaster to the nose by the herbalist. The depositions are to be sent to the Attorney-General, with whom the further conduct of the case rests.

Disinfecting Machines.

At a meeting of the Lurgan Board of Guardians on Nov. 15th Mr. J. M. Moore reported on the testing by a committee of a disinfecting machine used by them as well as in Portadown. On the outside of the machine there was a gauge which was supposed to indicate the temperature within. On heating the apparatus to the usual height three different tests were made by placing a thermometer inside the machine and comparing it with the outside gauge. A thermometer was wrapped up inside a blanket and when the outside gauge indicated a temperature of 450° F. the thermometer registered only 112°, showing an error of 338° on the part of the machine. In the other tests the thermometer was placed in the machine uncovered with the result that errors of 232° and 207° were proved. As it is necessary to get a temperature of 300° to destroy germs the machine was thus both defective and deceptive, for people who had their clothing passed through it believed the articles to be properly disinfected, whereas such was not the case. A charge of from £1 to 30*s.* had been made to every person using the machine in Lurgan and in Portadown, and the guardians and the public had been deceived. The machine had been relied upon by the workhouse, by the sanitary bodies of Lurgan and Portadown, and by three rural councils. It was advised that a permanent disinfecting chamber should be erected and that the makers of the machine (which cost £200) should send an expert to test it in the presence of the committee.

Belfast Medical School.

It is satisfactory to know that despite the falling off in the number of students at other schools this year there is little change at Belfast. At the Queen's College there is a slight decrease, 189 as against 200 last year; while at the Royal Victoria Hospital there is an increase, 155 as against 147 of session 1899–1900.

Royal Victoria Hospital, Belfast.

Mrs. W. J. Pirrie, who with her husband, the Right Hon. W. J. Pirrie, D.L., has done so much to raise the necessary funds for the building of the new Jubilee Memorial Hospital in Belfast, is collecting a sum of money to perpetuate the memory of the late Professor J. Cuming. A tablet is to be placed in the ward of the new hospital called after Professor Cuming inscribed with the names of contributors of five guineas and upwards. In March last the amount subscribed for this object amounted to £7000, and Mrs. Pirrie

now makes a further appeal, so that when she closes the list on Dec. 15th she may have realised a total sum of £10,000.

Assault on a Medical Man.

Mr. M. M. Sheedy of Kilmallock, in the discharge of his duty as a guardian, directed the attention of the board of guardians of the Kilmallock Union to the fact that some of the inmates had come from other union districts. As the result of an investigation five men were discharged from the house. One of them, named McNamara, went to Mr. Sheedy's residence one evening lately and abused him. Mr. Sheedy ordered him out and he accordingly left, but marched up and down outside still indulging in abusive language. After a time he approached one of the windows and shattered it, doing damage to the amount of £1. Mr. Sheedy rushed out and confronted McNamara who told him that it was he who had broken the window, that he would do it again, and that he would "do" for him (Mr. Sheedy) when he came out of prison. McNamara followed up his threats by seizing Mr. Sheedy and endeavouring to throw him down, but fortunately the procedure was reversed, as Mr. Sheedy managed to grapple with his assailant and to hold him till the police arrived. In due course McNamara was brought before the magistrates and even then his attitude was so threatening that it was found necessyar to place a constable on each side of him. He was sentenced to a month's imprisonment with hard labour for being drunk and disorderly. For breaking the window and using threatening language he was ordered to find bail himself in £20 and two sureties of £10 each, or in default to be imprisoned for three months, to take effect on the expiration of the first sentence. Mr. Sheedy's plucky action and the exemplary sentence of the magistrates ought to serve to teach the rowdy element in workhouses that assaulting guardians and destroying property is an amusement which cannot be indulged in with impunity.

Nov. 20th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Drinking-water Question.

THE question of the quality of the drinking-water supplied to Paris is always coming to the fore and I have many times brought the subject before the notice of your readers. Every year as the hot weather comes round the matter is discussed with fresh interest. The water engineers argue that the supply of drinking-water far exceeds the quantity necessary for the population, while the hygienic authorities reply first of all that the water is not as pure as the engineers maintain because it does not come from a source which is free from danger of contamination, and secondly, that even if it were pure a great part of the supply is taken up by lifts and for flushing closets and the like, because it is supplied at such a pressure that it can be used for such purposes without the company needing to have recourse to the pumps which are necessary for the water of the Seine to be so used. These arguments take place every year and meantime the question is no nearer solution. The only real remedy—namely, that of a double and separate supply, one of drinking-water and the other of water for working purposes supplied at a proper pressure—is never applied. The engineers persist in their idea of increasing the supply of so-called drinking-water, and to this end they are always taking up new sources of supply and constructing new filtering-beds. However, all the principal sources of supply in the neighbourhood of Paris are already taken up; new ones have to be sought at a greater distance and consequently at a greater expense, and owing to the increase in the number of houses these sources are liable to pollution from contamination of the gathering grounds. As for filtering-beds it becomes more and more evident that but little trust can be placed in them. So it comes to pass that typhoid fever is far from having disappeared from Paris as it has from Vienna, and as it would have disappeared from Paris if that city were supplied exclusively with good drinking-water—for the sums which have been expended to this end are enormous and quite enough for the purpose. During the month of October the weekly number of cases of typhoid fever, so far from diminishing, have been from 70 to 90, with a mean of seven deaths. In the suburbs, especially at Saint Denis and Gennevilliers, the number of deaths from typhoid fever has been three times as great as during the corresponding period of 1898. The water engineers give their stock answer: they say that the inhabitants of Gennevilliers, for instance, persist in drinking the water of the Seine in spite of all prohibition and in spite of there being plenty of drinking-fountains. As for bacilli, they are ubiquitous. They are found in mineral waters, in spring water, and on fruit and vegetables, while on the skin of one peach as many as 250,000 have been found. Another explanation which the engineers give as to the presence of contaminated waters in the town reservoirs is that the river Vanne, which supplies most of the capital, is fouled at its source, and they bring forward as a proof of this argument that the town of Sens, which is higher up the stream than Paris and derives its water from the river, is as much stricken with typhoid fever as is the capital itself.

At a recent meeting of the Council of Hygiene there was a lively discussion on this subject. M. Henriot remarked that as a matter of fact the town of Sens had been free from typhoid fever this year at the very time when Paris was most affected by this disease. The sources of the Vanne could not therefore be to blame and it was evident that the pollution occurred between Sens and Paris and most likely in the Paris reservoirs themselves. The chief engineer, M. Bechmann, who had at the beginning of the summer declared that not a drop of Seine water would be given to the inhabitants of Paris to drink, said that Seine water had been mixed with drinking-water in the mains when the water-supply looked like failing altogether, but this had only happened once. The results, however, are sufficiently serious, for typhoid fever, which in 1898 gave rise in Paris to 346 cases with 67 deaths, was the cause in 1899 and the first half of 1900 of 3553 cases and 600 deaths. One of the daily papers started an inquiry and arrived at the following startling results:—It is unfortunately true, even in addition to the probable pollution of the water of the Vanne, that the Charonne reservoir has constantly supplied unwholesome water to the Parisians with the full knowledge and acquiescence of the engineers. The Charonne reservoir is divided into two parts, one of them containing ordinary Seine water and the other containing water derived from the filtering beds at Ivry. These filtering beds, which have been constructed quite recently in opposition to the opinions of the committees of hygiene at great cost, are composed of successive layers of gravel gradually becoming finer (*système Puech*); in the opinion of the inventor himself they act merely as strainers and do not really purify the water, because the water as it issues from the filters still retains from 60 to 70 per cent. of its organic matter and about 5 per cent. of its microbes. The intake of this water at Ivry is in one of the dirtiest portions of the Seine, near factories which discharge waste water into the river and near the outlets of sewers of suburban parishes. Under these circumstances the water as it comes from the filters cannot really be regarded as fit for drinking, and it is this water which after arriving at the Charonne reservoir has been conveyed to the reservoir at Ménilmontant and has been there mixed with the wholesome water of the Dhuys. This proceeding has been going on for four months. It was just then that typhoid fever attained its maximum in Paris. When the engineers saw that the matter was discovered they discontinued mixing the water and typhoid fever immediately declined with the precision exhibited by a laboratory experiment, for in 12 days afterwards the mortality fell from 18 deaths per week, a rate at which it had remained for a considerable time, to seven deaths per week. The Council of Hygiene has been much exercised by these revelations, and after hearing a careful report by M. Le Roy des Barres protested against the imperfect purification to which the river water which had been distributed for human consumption had been submitted. Resolutions were also unanimously passed by the council declaring the following to be urgent requisites:—(1) effective and permanent supervision by the Council of Hygiene over the collection, conveyance, and distribution of water intended for human consumption in the Department of the Seine; (2) maintenance of a sufficient space free from contamination round the intakes or gathering grounds; (3) constant inspection of the original sources of the water, so that any water of doubtful quality may be shut off; (4) protection of the water from contamination during the whole of its transit; (5) eventual purification of the water either by

filtration or otherwise and resumption of the experiments on sterilisation on a large scale; and (6) immediate separation in Paris of the water intended for human consumption from that intended for other miscellaneous or trade purposes.

Small-pox in Paris.

At the present time there is a recrudescence of small-pox in Paris. As a rule there are always some few cases of this disease existing, but only a very few, for vaccination is practically obligatory throughout France. Such cases as do occur, therefore, are found almost entirely in foreigners, and it was therefore to be expected that the enormous influx of foreigners into France for the Exhibition would result in an increase of the cases of small-pox. Such is the case. During the year 1899 the deaths from small-pox in Paris numbered four. The Exhibition was opened in April, 1900, and from Jan. 1st to the end of May there were 15 deaths from small-pox, while from June 1st up to the closing of the Exhibition (Nov. 11th) there were exactly 100, of which 14 occurred during the week Oct. 28th to Nov. 3rd, a week during which the Exhibition was particularly well attended. Two arrondissements were specially affected, the one being Grenelle, where most of the foreigners employed in the Exhibition were lodged, and the other being the eighteenth, close to the Aubervilliers Hospital, which is reserved for cases of small-pox.

Nov. 21st.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Examination for the Degree of M.D.

IN Germany the possession of the degree of M.D. does not carry with it any legal authorisation to practise medicine. In order that a practitioner may be legally qualified he must pass the State examination, and for the purpose of avoiding the anomaly that a duly appointed Doctor of Medicine might be unqualified in the eye of the law it was last year decided that Germans should not be allowed to graduate as M.D. until they had passed the State examination. The conditions of examination for the degree of M.D. have hitherto differed very much in the various universities, but by a decree of the Federal Council they have now been made uniform. The candidate has to write a "dissertation" on a scientific subject, and this dissertation must be approved by the medical faculty and printed at the expense of the candidate. There is a great difference between the oral examination for Germans and that for foreigners, the former being not much more than a mere formality, because the candidates have already passed the difficult State examination. German candidates have, in fact, only to present themselves for a short "colloquium" with the dean and two members of the medical faculty, and in this respect foreigners, if duly qualified to practise in Germany, are regarded as Germans. Foreigners who have not passed the State examination, and who are therefore not qualified to practise in Germany, have to pass the "examen rigorosum" before a commission consisting of the dean and seven members of the medical faculty. There are two oral examinations, one theoretical and one practical. The subjects of the theoretical examination are anatomy, physiology, pathology, and hygiene; those of the practical examination are clinical medicine, surgery, and gynæcology with obstetrics. The practical examination has to take place at a hospital, and the candidate must examine several patients. In the theoretical examination the time allotted to each candidate is one hour in anatomy and physiology respectively and half an hour in pathology and hygiene. The classifying distinctions of successful candidates are "rite," "cum laude," "magnâ cum laude," and "summâ cum laude," the last distinction being granted only by the unanimous vote of the whole medical faculty. Unsuccessful candidates may present themselves a second time after the lapse of six months. Foreigners desiring to graduate as M.D. have to produce certificates showing (1) that their general education is in accordance with the regulations in force in their respective countries, and if such regulations do not exist they have to satisfy the examiners that their education is approximately equal to that given at German schools; (2) that they have attended a course of instruction lasting from four to five years at a proper medical school abroad or at a German university; and (3) that they have been registered for at least one semester as students at the medical faculty of the university where they desire to graduate as M.D. Exemptions from the above rules may be granted under special circumstances. The principal feature of the new regulations is the obvious rendering of the examination more difficult for foreigners.

Medical Graduation at Various Universities.

In the year 1899 the number of men who became qualified to practise was 1364. It was remarkable that many more candidates passed at Munich (179) than at Berlin (141). The number of medical students at Munich increases from year to year, so that the clinics, laboratories, &c., of this university are altogether overcrowded. German students have the right of changing from one university to another during their curriculum, and many of them do so several times. As Munich is a very pleasant place, owing to the "gemüthlichkeit" (affability) of the townspeople, its situation in the immediate neighbourhood of the Alps, and last, but not least, the wide-spread renown of the Munich beer, a great many medical students have a preference for Munich University. The number of medical students in Munich was 1165 in the summer of 1899, whilst in Berlin only 1093 matriculated. As to the teaching staff, that of the Munich Medical Faculty consists of only 62 professors and *privat-docenten*, as compared with 142 at Berlin. The number of degrees conferred at Würzburg was 139, being, therefore, not much less than at Berlin, although only 566 medical students were registered there. The Berlin State examination being regarded as the most difficult one in Germany it would seem that a good many students leave Berlin one or two semesters before the end of their curriculum and settle at another university in order to pass the examination there. The number of medical degrees conferred at the other universities were as follows:—111 at Halle, 95 at Leipsic, 89 at Kiel, 72 at Bonn, 65 at Freiburg, 64 at Breslau, 59 at Erlangen, 44 at Strassburg, 44 at Greifswald, 43 at Jena, 40 at Göttingen, 37 at Königsberg, 36 at Tübingen, 33 at Marburg, 29 at Giessen, 28 at Heidelberg, and 16 at Rostock. 21 foreigners became qualified, of whom three were Americans and one was an Englishman.

Serum Treatment of Malaria.

An important communication concerning malaria has been made by Dr. Sander of Berlin in the *Deutsche Medicinische Wochenschrift*. He has received a letter from Dr. Kuhn, chief medical officer to the South-West African field force, to the effect that he (Dr. Kuhn) had succeeded in curing malaria by injections of serum. The serum is obtained from horses which have contracted the so-called "sterbe" disease. By injections of this serum malaria becomes altered from a chronic relapsing disease to an acute one, curable in from two to six weeks; immunity is also obtained. After the injection slight fever of a more continued character generally appears, but no local reaction takes place. 50 natives immunised by Dr. Kuhn in 1899 did not take the disease in the malarial season of that year, whilst numerous others who had not been immunised fell ill but were cured by the injection. Dr. Kuhn being on his way home more detailed information will be received very soon.

Plague at Bremen.

A case of plague occurred at Bremen a fortnight ago, the patient being a sailor on board a steamer which had come from Brazil. Bacteriological examination showed that his illness was plague. He had been for three days in the town and had been in communication with a great many people. The other members of the crew of the steamer were conveyed to the hospital and kept under observation, but as no other case has since happened they have now been discharged. The patient himself died in three days. The report of a fresh case of plague at Hamburg was unfounded. A sailor suspected of having this disease was found to be suffering from simple sore-throat and was discharged from the hospital in a few days.

Nov. 19th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Agitation against Foreign Practitioners.

THOSE agitating for the exclusion from practice in Italy of medical men holding only foreign diplomas have evidently no intention of allowing the question to drop. At the meeting lately held in Rome by the delegates of the Ordini

di Medici the subject was again brought up by Dr. Santini, who, after recounting what had already been done in regard to it, recommended that the different branches of the Association should bring their influence to bear upon the deputies of their respective districts so as to facilitate and to hasten the presentation to the new Parliament of the projected law which was about to be submitted to the last Legislature when the dissolution took place. This Bill, it will be remembered, in its final form proposed not only to restrict the list of foreign medical men admitted to those holding diplomas of countries granting reciprocity to Italy, but further to permit those who might then still remain to practise amongst persons of their own nationality only. This latter restriction would seriously affect the British practitioner in Italy by cutting off his American *clientèle* and possibly also that from British colonies. If the Bill be allowed to pass in this form the effect will be to exclude from practice all foreigners who do not possess an Italian degree, since no country, so far as I am aware, grants precisely the same amount and kind of privilege as this Bill proposes to accord to foreign practitioners. True, certain prominent members of the profession here promise that the Bill will be modified in this particular before it is passed in such a way as to meet the liberal offer of Great Britain to put into force for Italy Part II. of the Medical Act of 1886, which will secure to Italians properly qualified full rights of practice in Great Britain. Whether this concession will be made remains to be seen; meanwhile the suspense amongst foreign medical men of all nationalities, who realise that within a short time they and their families may be deprived of the means of livelihood, is naturally very great. The remedy, it has been said, lies in their own hands—let them take an Italian degree. To the younger men this is doubtless a possible solution of the difficulty, although even to them the task of preparing for and passing examinations conducted in Italian is sufficiently formidable and the hardship would be great. But that the older men should be required to go through such an ordeal is not reasonable or just, and yet it is upon them, for obvious reasons, that the loss entailed by the prohibition to practise would fall most heavily.

Typhoid Fever and the Consumption of Raw Vegetables.

Professor Gualdi, chief of the Bureau of Hygiene of Rome, who has given much attention to the study of typhoid fever as it occurs in large cities and who intends shortly to publish a paper on the subject, has observed a close connexion between its prevalence and the consumption of raw vegetables, the seasonal curve of typhoid fever corresponding closely to that indicating the quantity of such vegetables sold throughout the different months of the year. Apart from the occurrence of local infections due to accidental pollution of water-supply or milk-supply, the contamination of either of the latter cannot satisfactorily explain the distribution of cases in the city of Rome, whereas it is readily accounted for on the hypothesis that these cases arise in connexion with the consumption of raw vegetables which is so extensive among the lower classes there. At Padua a careful microscopical and bacteriological examination, conducted by Dr. Ceresole, of vegetables commonly eaten in the raw state has yielded results which clearly demonstrate the importance of these as a possible source of parasitic and infectious diseases generally. The vegetables examined, consisting of lettuce, endives, radishes, fennel, and celery, were bought on the market and were first well washed with the excellent water of the Padua aqueduct so as to place them in the same condition as that in which they are usually eaten. They were then cut into small pieces with sterilised scissors, and placed in a sterilised flask of distilled and sterilised water. The water containing the particles detached from the vegetables after a vigorous shaking was then subjected to a direct microscopical and to a bacteriological examination. The former revealed an extraordinary quantity of animals belonging to various groups, rhizopoda, infusoria, worms, crustacea acarida, arachnida, and insects, some 52 species in all, mostly innocuous, but including amœba coli, balantidium coli, isotrica prostoma, and anguillula stercoralis. A great number of eggs of worms were found and among them some pathogenic species—namely, tænia echinococcus, oxyuris vermicularis, ascaris lumbricoides, trichocephalus dispar, and ankylostoma duodenale. By the bacteriological examination microbes were found in such myriads that a complete list of their species could not be made. For washing 100 grammes of vegetables 300 grammes of water were employed, and one cubic centimetre of the washings was found to contain on an average some 10,000 000 microbes, including bacillus coli communis, bacillus septicus, bacillus tetani, and a bacillus indistinguishable from bacillus typhosus. Of six animals inoculated with the washings heated for some minutes to from 70° to 80 C°., all died, five from malignant œdema and one from tetanus. Of four animals inoculated with the washings not heated two died, one from malignant œdema and one from tetanus: the other two developed a large abscess at the seat of inoculation, from the contents of which pure cultures of streptococcus and staphylococcus pyogenes were obtained. The danger of eating salads made of vegetables containing this vast amount of parasitic and microbic life must be considerable. A thorough disinfection is, however, easily effected by soaking the vegetables for half an hour in a three per cent. solution of tartaric acid (about an ounce of acid to a quart of water).

Nov. 16th.

CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

Syphilis in Asia Minor.

SYPHILIS has for a considerable time been increasing in certain provinces in Asia Minor, and has become so diffused that according to official reports 80 per cent. of the inhabitants are affected with it, and the Government has now ordered the adoption of measures intended to check the spread of the disease. Every year the Turkish Government selects for military service 12,000 men out of 20,000 in each *vilayet*, but in the *vilayets* where syphilis prevails the requisite 12,000 efficient recruits can only be obtained by selection from among 30,000 men, the remaining 18,000 being unfit for service. The provinces where syphilis has gained such a hold are Castamoni, Bartin, Erzingian, Angora, Ismidt (Nicomedia), and Adana, the last of which was added to the list only a few days ago. This prevalence of syphilis in these regions dates from the Russian occupation of Constantinople in 1830, when a force of 30,000 Russian soldiers was landed near Beicos on the Asiatic coast of the Bosphorus. It is the Moslem population who suffer most severely from the disease, for they consider an examination by a medical practitioner to be an offence against morality, especially if the patient happens to be a woman.

Death due to Corporal Punishment.

A pupil at a Turkish school in Scutari, one of the suburbs of Constantinople, died three days after the infliction of severe corporal punishment. During these three days he lay in a drowsy condition with occasional convulsive seizures, and at the necropsy it was found that the meninges were very much congested. The school teachers have been arrested. In Turkey corporal punishment in schools is forbidden.

The Accident to Professor Rieder.

Professor Rieder, who had the misfortune to fall from a building which was in course of construction, as mentioned in THE LANCET of Oct. 27th (p. 1245), is still confined to bed. Professor Schede, who was sent for from Bonn, did not discover any fracture of the spine; he connected a manometer with the spinal canal and found that the pressure of the cerebro-spinal fluid was higher than normal. The paralysis of the rectum and bladder still continues. The Sultan has conferred upon Professor Rieder the silver and gold medal of Imtiaz and has provided for him financially.

The Imperial Medical Society of Constantinople.

The meetings of the Imperial Medical Society, which take place every Friday, were resumed a month ago. The proceedings at the meetings include many valuable communications and discussions and the exhibition of interesting cases. The society was founded by the medical officers of the allied armies stationed in Constantinople during the Crimean war with the view of establishing a distinction between properly qualified medical men and irregular practitioners who had never attended a medical school. All the hygienic progress that has been made in Turkey during the last 40 years has been due to this society. The late Sultan Abdul Medjid, recognising the value of the society, took it under his patronage and granted it an allowance of £T50 per month, which has up to lately been paid regularly, but now the

allowance is reduced to £110 and is paid irregularly. At the opening of the present session the President drew attention to the precarious financial condition of the society, which is so poor as to be unable to pay either the rent of the building where the meetings are held or the wages of the housekeeper, the only servant who is employed.

The French Medical School at Beirut.

Professor Morat and Professor Vallas of the Lyons Medical School have been directed by the French Government to proceed to Beirut in order to supervise and take part in the examinations which the students at the medical school there have to pass before obtaining their diplomas. The Turkish Government has also sent two of the professors of the military medical school in Constantinople for the same purpose. After having been approved by these French and Turkish professors the graduates of the Beirut Medical School are allowed to practise in Turkey without further examination, such as is obligatory on those whose qualifications have been obtained at other medical schools.

Nov. 10th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Medical Practitioners Act Amendment Bill.

A BILL to amend the law relating to medical practitioners has passed through committee in the Legislative Assembly of New South Wales. Many Bills with the same object have been previously rejected because the House thought that they went too far and gave too exclusive privileges to medical practitioners. The present Bill is simply to enable the public to discriminate between the legally qualified and registered practitioner and the unqualified and unregistered quack. It provides a heavy penalty for an unqualified person who assumes titles representing that he is a properly qualified medical practitioner or that he holds diplomas which he has not obtained. Power is also given to the Medical Board to remove from the Register the name of any person who does not possess or has ceased to possess the qualification on which he has been allowed to practise, or has been convicted of certain offences, with a right of appeal to the Supreme Court.

The Plague.

The bubonic plague has practically ceased. Seven weeks have elapsed since the last case occurred in New South Wales and no fresh cases have occurred in Victoria or South Australia. The plague hospital at Sydney quarantine station has been disestablished, all the patients having been released, and Sydney is declared free from infection.

Health of Sydney.

The officer of health of the city of Sydney, Dr. C. E. Corlette, has issued a very comprehensive and interesting report on the sanitary condition of the city. He states that extended powers are necessary in order to deal properly with a number of matters affecting the public health in the city, so that detailed provisions should be set out relating to such matters as the paving and draining of yards, the construction of stables, building over made ground, definite rules as to foundations, damp-proof courses, ventilation beneath floors, lighting and ventilation of rooms, and the prevention of overcrowding and of the storage of food materials in unsuitable places. Dr. Corlette points out that the vital statistics as at present obtained are fallacious, owing to ignorance as to the age and sex distribution of the population. Concerning the housing of the poorer classes in Sydney Dr. Corlette observes that a radical change is necessary. Back-to back houses exist, and the covering in of open areas at the rear of buildings has gone on to a serious extent. He says that special provision must be made for housing the poorer classes in sanitary conditions by the erection of model dwellings at low rentals and the demolition of the buildings in which they were formerly housed; but that the condemnation of low-grade dwellings by itself simply increases the pressure on the existing accommodation in the neighbourhood and causes increased overcrowding of dwellings, as in the case of Darling Harbour where houses were destroyed during the plague outbreak.

Decline in the Birth-rate in New South Wales.

The vital statistics for the colony of New South Wales for the last year show that the birth-rate continues steadily to decline. The excess of births over deaths was 1·54 per cent. representing a marginal loss of nearly one half during the past decade, the excess in 1888 being 2·36 per cent. A notable feature is that the native-born population reproduces nearly 20 per cent. less than the immigrant portion of the community. It is suggested that this state of affairs is due to the alarming prevalence of criminal abortion and the unrestrained advertising of those who practise it in the public press. Lately legislation has been passed to suppress such advertisements and it will be interesting to see if any improvement in the birth-rate will occur in the next few years.

The Australian Natives' Association and the Medical Profession of New South Wales.

Reference was made in a previous communication to the establishment in New South Wales of the Australian Natives' Association as a friendly society. At a meeting of the Council of the New South Wales Branch of the British Medical Association, held on August 7th, it was resolved:

That the Australian Natives' Association as at present constituted is prejudicial to the interests of the medical profession in terms of Article of Association 35a, and that a circular embodying the foregoing resolution be sent to all members of the medical profession.

On August 31st a general meeting of the medical profession was held to consider the matter, Dr. P. Sydney Jones being in the chair, and there was a large and representative gathering. Dr. Sydney Jamieson moved—

That this general meeting of the medical profession endorses the resolution of Jan. 10th, 1896—viz., that medical aid and benefit societies are intended for the poorer members of the community and not for the well-to-do, and that in the opinion of this meeting it is not desirable that people in receipt of incomes of over £200 per annum should receive medical attendance and medicine from societies as at present organised.

Dr. Jamieson pointed out that the Australian Natives' Association adopted no wage limit; that the members, on the contrary, enrolled a better class than the ordinary friendly society; and that in Victoria such people as well-paid civil servants, bank managers, parliamentary and municipal magnates, land-owners, and business men were found as benefit members. The rate of pay for their medical officers was fixed at less than 15*s.* per annum; and no extra fees were allowed except for midwifery. The motion was seconded by Dr. Abbott, and after some verbal amendment was carried. The second motion was brought forward by Dr. W. H. Goode:—

That this meeting approves of the course adopted by the council of the New South Wales Branch of the British Medical Association in calling attention to the action of the Australian Natives' Association, and declaring it a society "prejudicial to the interests of the medical profession."

Dr. R. S. Bowker seconded this motion, which was carried. Dr. R. Worrall in a very earnest speech moved that—

This meeting earnestly appeals to those members of the profession whose advice is sought in consultation to refrain from meeting medical officers to associations which have been declared "prejudicial to the interests of the medical profession."

Dr. Angel Money seconded this motion, which also was carried. Finally, it was resolved to suggest to the New South Wales Branch of the British Medical Association that it should form a permanent investigation committee to collect and circulate information which may be of use to the profession in their dealings with friendly, benefit, and medical aid societies, and hospitals and kindred institutions, and any other matters affecting the welfare of the medical profession throughout Australasia.

Queen Victoria Home for Consumptives.

At the time of the Jubilee funds were subscribed to establish homes for consumptives in commemoration of the Queen's Jubilee, but so far nothing has been done. The third annual meeting of subscribers to the fund was held on Sept. 26th. The report stated that the only thing done had been to maintain the Thirlmere Home where 94 patients had been admitted, of whom 26 were benefited, 24 had died, and 44 were unrelieved. The average cost per bed per annum was £34 16*s.* 2*d.* The large number of deaths and unrelieved cases was due to indiscriminate admissions of necessitous and urgent cases in the last stages of the disease. The committee had decided in future only to admit such cases as could reasonably be expected to be so far restored to health as to be able to resume work of some kind. The committee had waited on the Colonial Secretary to urge the Government to establish a hospital for poor persons in advanced stages of the disease.

A Medical Libel Action.

Mr. J. W. O'Brien, F.R.C.S. Irel., brought an action in the Supreme Court, Melbourne, against Mr. Thomas Scott,

M.R.C.S., for the recovery of £1000 damages for alleged libel, which consisted of two paragraphs written by defendant which appeared in the *Warrnambool Standard*, stating that the plaintiff, as honorary surgeon to the local racing club, had improperly treated an injured jockey. The case was settled out of court, Mr. Scott stating that he had discovered that there was no ground for his remarks about Mr. O'Brien and agreeing to pay £400 costs.

Conflicting Medical Evidence.

At an inquest on the death of a patient in the Albury Hospital some conflicting evidence was given by the medical men concerned. Dr. Schlink had certified that the man was insane, but Mr. Andrews, the Government medical officer, said that he was not insane, but that he was a fit patient for the hospital when he died. Mr. M. O'Shaughnessy deposed that death was due to obstruction of the bowel. Mr. Andrews, Dr. Muller, and Dr. Schlink said that the cause of death was lead poisoning. The coroner found, in accordance with the preponderance of the medical evidence, that deceased died from lead poisoning.

An Explanation.

In a letter in THE LANCET of August 25th (p. 631) Mr. W. B. Vance insinuated that the account given by your Australian correspondent of what he calls "the O'Hara case" was incorrect and biased. In writing it I took special pains to give an impartial statement of facts, which could nearly all be corroborated by documentary evidence. Having critically re-read it I affirm that every statement made in my letter in THE LANCET of May 26th (p. 1554) is correct, with one exception—viz., in the account of the meeting (of which at the time of writing there was no authenticated report other than that which had appeared in the newspapers) it is stated "the others" referring to Dr. Macansh and Mr. Cuscaden, "admitted Mr. O'Hara's culpability." It should have been, instead of "others," Mr. Cuscaden, as I find on referring to the report in the *Australasian Medical Gazette*, where he only is reported to have said, "I also agree with the Council that a breach of ethics has been committed." I regret this unintentional mistake, the result largely of condensation. A comparison of the authenticated report of all the proceedings given in the *Australasian Medical Gazette* of April 25th will show that my account was otherwise correct.

Oct. 10th.

Medical News.

UNIVERSITY OF BRUSSELS.—The following practitioners have satisfied the examiners and obtained the M.D. degree:—

H. M. W. Bridgman, Alassio, Italy, and London; A. V. Johnson, Kensington; R. Winckler King, Bombay; W. M. Permien, Allahabad; John R. O'Brien, Great Yarmouth; and A. J. Treasuryvala, Bombay.

Nine candidates entered.

ROYAL COLLEGE OF SURGEONS IN IRELAND: DENTAL EXAMINATION.—Mr. John Isidore Potter having passed the necessary examination has been admitted a Licentiate in Dental Surgery of the College. The following candidates have passed the primary part of the examination: Mr. T. Beaumont, Mr. G. Friel, and Mr. L. Goldfoot.

NEWTON ABBOT WORKHOUSE.—Mr. J. W. Ley, F.R.C.S. Eng., has collected over £40 and purchased two pianos for the use of the inmates of Newton Abbot (Devon) Workhouse.

TYPHOID FEVER AT PLYMOUTH.—An outbreak of typhoid fever has occurred at Plymouth and the medical officer of health (Mr. F. M. Williams) has traced the cause to contaminated milk supplied from a small dairy-farm outside the borough boundary at Egg Buckland. The typhoid fever ward of the Borough Infectious Diseases Hospital was only built for the accommodation of 16 patients, although on Nov. 15th it had 23 cases. The sanitary committee will open the scarlet fever block, which is empty, and also will fit up the old laundry with beds. The committee will recommend the Town Council at once to complete the enlargement of the isolation hospital. 55 cases of typhoid fever have been notified in Plymouth up to Nov. 20th.

ERRATUM.—ENTRIES AT THE MEDICAL SCHOOLS.—The figures for University College, Sheffield, given in THE LANCET of Nov. 3rd (p. 1283), should read as follows: Full medical course 1900-1901, eight; special classes, two; dental, one; full medical course 1899-1900, five; increase, three.

A MEDICAL GOLF TOURNAMENT, which was recently concluded at Trafford-park, proved a great success. There were about 60 entries. Mr. W. J. Baird of Springwells, Bury, who was fortunate in having two walk-overs, played a consistently steady game throughout with a handicap of 7 and won the tournament, beating Mr. P. Worley of Pendleton, handicap 9, by 3 up and 2 to play.

ROYAL GEOLOGICAL SOCIETY OF CORNWALL.—At the annual meeting of this society held at Penzance on Nov. 13th the President (Mr. J. D. Enys) presented Dr. Clement Le Neve Foster, inspector of metalliferous mines for North Wales, with the William Bolitho Gold Medal in recognition of the distinction which he has attained as a mineralogist and also of the great services rendered by him to the society as curator during the period when he held the appointment of inspector of mines for Cornwall and Devon.

MUNICIPAL HONOURS AND MEDICAL MEN.—In addition to those whose names were published in THE LANCET of Nov. 17th (p. 1451) the following members of the medical profession have been elected or re-elected mayors:—Bolton: Mr. J. E. Scowcroft, M.D. St. And. (re-elected). Carnarvon: Mr. W. J. Williams, L.R.C.P. Edin., L.F.P.S. Glasg. (re-elected). Cheltenham: Mr. G. Norman, M.B., B.S. Durh. (re-elected). Crewe: Mr. Charles Wilson, M.D. Glasg. Pwllheli: Mr. S. W. Griffith, L.R.C.P. Edin., L.R.C.S. Edin. (re elected). Saffron Walden: Mr. John Parkinson Atkinson, M.D. Glasg.

CENSURE OF A PUBLIC VACCINATOR.—At the meeting of the Bideford (Devon) Board of Guardians held on Nov. 13th a communication was read from the Local Government Board in reference to one of the public vaccinators of the union. The letter stated that out of 405 vaccinations by the officer referred to only 95 were performed by him, the remainder having been done by his deputy. The Local Government Board considered this improper, as only when it was absolutely necessary should the deputy perform the operation; they thought that the contract ought to be determined, but they desired to have a written explanation from the public vaccinator in question.

THE members of the London Hospital Medical Club held their annual dinner on Nov. 15th, when Mr. E. H. Openshaw was the guest of the club on his return from South Africa. A good muster of the members supported the chairman, Mr. C. W. Mansell Moullin, in giving a hearty welcome to their guest. In response to the toast of his health Mr. Openshaw gave an interesting account of his experiences, not the least exciting being a graphic description of the running down of the ill-fated *Mexican* by the boat on which he was a passenger. Mr. Openshaw also exhibited a large number of photographs illustrating the various phases of the country through which he travelled.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

AUBREY, THOMAS, L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer, Newmarket Union, vice A. G. L. Campbell, resigned.

BONNER, T. J., M.B., C.M. Aberd., has been appointed Medical Officer by the Towyn District Council, vice B. M. Bone, resigned.

BRADY, CHARLES M., L.R.C.S. Irel., L.A.H., has been appointed Honorary Medical Officer to the Royal Albert Edward Infirmary, Wigan, vice R. Hamilton Cowan, deceased.

BROWNE, ADA M., L.S.A., has been appointed Assistant Anæsthetist to the Chelsea Hospital for Women.

CREAN, JOHN JOSEPH, Lieutenant-Colonel, L.R.C.P. & S. Irel. (retired list Royal Army Medical Corps) has been selected for duty with the troops at Brighton.

EDWARDS, C. W., F.R.C.S. Edin., L.R.C.P. Lond., M.R.C.S., has been appointed Certifying Surgeon under the Factory Acts for the Wincanton District of Somersetshire.

FENN, C. E., M.B. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon, Worcester Infirmary.

FIELD, R. C., M.B. Lond., has been appointed *pro tem.* Medical Officer of the Patrington Union, vice E. Robinson, resigned.

FULLER, A. W., M.B., Ch.B. Edin., has been appointed Assistant House Surgeon to the Rotherham Hospital and Dispensary.

FULLERTON, ANDREW, M.D., has been appointed Surgical Registrar to the Royal Victoria Hospital, Belfast.

FULTON, WM., M.B., C.M. Glasg., has been re-appointed Parochial Medical Officer by the Stevenston Parish Council.

HAYDEN, W. FALCONER, M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the County Hospital, Newport, Monmouthshire.

ILES, MARY M., M.B., B.S. Lond., has been appointed House Surgeon to the General and Children's Hospital, Walthamstow, N.E.

JONES, HERBERT, L.R.C.S. Irel., D.P.H. Cantab., has been appointed Medical Officer for the Combined Sanitary Districts for rural Herefordshire, vice H. V. Sandford, resigned.

KENWOOD, H. R., M.B., C.M. Edin., L.R.C.P. Lond., D.P.H., has been appointed Medical Officer for the Borough of Stoke Newington.

MCCLYMONT, JOHN, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Parochial Medical Officer by the Stevenston Parish Council.

NICHOLAS, JAMES HAMILTON, Major, L.R.C.P. Irel., L.R.C.S. Edin., (retired list Royal Army Medical Corps), has been selected for duty with the Southern District at Gosport.

OYSTON, W. F., M.B., Ch.B. Vict., has been appointed Certifying Surgeon under the Factory Acts, for Osmotherly District.

SHAW-MACKENZIE, JOHN A., M.D. Lond., has been appointed Physician to Out-Patients at the Samaritan Free Hospital for Women and Children, Marylebone-road, London, N.W.

STANFORD, W. B., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer, Hollingbourn Union, vice E. S. Webber, resigned.

STARKEY, WILLIAM, M.B., B.Ch. Irel., has been appointed Assistant Medical Officer to the Down District Asylum.

STEED, JOHN, M.D. Edin., has been appointed Medical Officer to Jarvis's Charity, Staunton-on-Wye, vice W. B. Barton, resigned.

TERNAU, P. J. W., L.R.C.P., L.R.C.S. Irel., has been appointed District Medical Officer, Smallburgh Union, vice A. Crisp, deceased.

TREVOR, R. SALUSBURY, M.A., M.B., B.C. Cantab., has been appointed Assistant Curator of the Museum, St. George's Hospital, Hyde Park Corner, London.

WALKER, E. T., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of the Luddenden Sanitary District, Halifax Union, vice E. E. Crowther.

WARD, J. A., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer to the Training Ship *Shaftesbury*, Grays, vice W. Robertson, resigned.

WEARNE, WALTER, M.R.C.S., L.S.A., has been re-appointed Medical Officer of Health for the Borough of Helston (Cornwall).

WILD, G. S., M.D. Durh., M.R.C.S., has been appointed Honorary Physician to the Bootle Borough Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRMINGHAM AND MIDLAND EYE HOSPITAL, Church-street, Birmingham.—Assistant House Surgeon. Salary £60 per annum, with apartments and board.

BRENTFORD UNION.—Assistant Medical Officer for the new infirmary, unmarried. Salary £100 per annum, with furnished apartments, rations, washing, &c. Subject to statutory deductions. Apply to the Clerk to the Guardians, Union Offices, Isleworth, W.

BRIDGNORTH AND SOUTH SHROPSHIRE INFIRMARY.—House Surgeon. Salary £80, with board and lodging in the infirmary.

BRIGHTON AND HOVE LYING-IN INSTITUTION AND HOSPITAL FOR WOMEN, 76, West-street, Brighton.—House Surgeon, unmarried. Salary £80 per annum, with furnished apartments, board, gas, coals, and attendance.

BRIXTON DISPENSARY, Water-lane, Brixton.—Resident Medical Officer for two years, unmarried. Salary £150, with furnished apartments, attendance, coal, and gas.

BURY INFIRMARY.—Junior House Surgeon. Salary £80, with board, residence, and attendance. Apply to Hon. Secretary, Dispensary, Knowsley-road, Bury.

CARDIFF INFIRMARY.—Assistant House Surgeon for six months. Salary at the rate of £75 per annum, with board, washing, and apartments.

CENTRAL LONDON SICK ASYLUMS DISTRICT.—Second Assistant Medical Officer and Dispenser at the Asylum at Hendon for twelve months. Salary £75 per annum, with board and residence. Subject to statutory deduction. Apply to the Clerk, Cleveland-street Asylum, Cleveland-street, W.

CHILDREN'S HOSPITAL, Forest House, Nottingham.—House Surgeon for six months, unmarried. Females ineligible. Salary at the rate of £100 per annum, with board and residence.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Second House Physician for six months. Salary at the rate of £30 per annum, with board and residence.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY, Wakefield.—Junior House Surgeon, unmarried. Salary £80 per annum, with board, lodging, and washing.

CLINICAL RESEARCH ASSOCIATION, 1, Southwark-street, London.—Assistant Pathologist. Commencing salary £125 per annum.

CROYDON GENERAL HOSPITAL.—House Surgeon for one year, unmarried. Salary £105, with board, lodging, and washing at the hospital.

DARLINGTON HOSPITAL AND INFIRMARY.—House Surgeon, unmarried. Salary £150 per annum, with rooms in the Institution. Applicant to board himself.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis-road, Shadwell, E.—House Physician. Board, residence, &c., provided and an honorarium of £25 given conditionally

GOVERNMENT OF CEYLON.—Medical Man for the Ceylon Medical College, for the post of Registrar, Curator of Museum, and Lecturer. Salary Rs. 6000 per annum, rising by triennial increments of Rs. 500 to Rs. 8000.—Address, Private Secretary, Colonial Office, S.W.

GUEST HOSPITAL, Dudley.—Assistant House Surgeon, for six months. Salary at the rate of £40 per annum, residence, board, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London.—Resident Medical Superintendent for one year. Salary 100 guineas, with board and residence in the Hospital.

HUDDERSFIELD INFIRMARY.—Junior House Surgeon. Salary £60 per annum with board, residence, and washing.

HULL ROYAL INFIRMARY.—Honorary Surgeon. Also Assistant House Surgeon for one year. Salary £60, with board and furnished apartments.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer for one year. Salary £100, with board and lodging.

LEICESTER INFIRMARY.—Assistant House Surgeon for 12 months. Salary £80, with board, apartments, and washing.

LONDON HOSPITAL MEDICAL COLLEGE, Mile-end, E.—Assistant Demonstrator of Anatomy. Salary £90 a year.

MANCHESTER CHILDREN'S HOSPITAL, Cartside-street, Manchester.—Assistant Surgeon. An honorarium of £50 per annum will be given.

MILLER HOSPITAL and ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Junior Resident Medical Officer for six months. Salary at the rate of £60 per annum, with board, attendance, and washing.

RAMSGATE AND ST. LAWRENCE ROYAL DISPENSARY AND THE GENERAL HOSPITAL AND SEAMEN'S INFIRMARY.—Resident Medical Officer, unmarried. Salary £100 per annum, with furnished apartments, board, and attendance.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon for six months. Salary at the rate of £50 per annum, with board, lodging, and washing.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo-bridge-road, London.—Resident Medical Officer for twelve months. Salary £70, with board and laundry. Also Assistant Physician.

ROYAL HOSPITAL FOR INCURABLES, Donnybrook, Dublin.—Resident Medical Officer for one year. Salary £100, with board and furnished apartments.

SEAMEN'S HOSPITAL SOCIETY ("DREADNOUGHT"), Greenwich, S.E.—House Physician for "Dreadnought" Hospital. Salary £75 per annum, with board and residence.

ST. MARY'S HOSPITAL FOR SICK CHILDREN, Plaistow, E.—Assistant Resident Medical Officer for six months. Salary £80 per annum, with board, residence, laundry, &c.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington.—Lectureship in Chemistry and Physics. Salary £150 per annum, with extra fees for London University Classes.

THROAT HOSPITAL, Golden-square, London.—Non-resident Junior House Surgeon. Salary £100 per annum, with luncheon daily.

TRINIDAD GOVERNMENT LUNATIC ASYLUM.—Assistant Medical Superintendent. Salary £250 and £50 allowance, rising by quinquennial increments of £50. Furnished quarters for unmarried man in the Asylum. Free passage provided. Appointment pensionable. Applications to the Private Secretary, the Colonial Office, S.W.

UNIVERSITY COLLEGE, London.—Assistant Surgeon.

UNIVERSITY OF GLASGOW.—Two additional Examiners for degrees in Medicine. Annual salary £30 in each case.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician and House Surgeon, for six months. Board and lodging provided.

Births, Marriages, and Deaths.

BIRTHS.

BARLOW.—On Nov. 16th, at Dalston-lane, N.E., the wife of Thos. Carey Barlow, L.R.C.P. Edin., of a son.

BEADLES.—On Nov. 17th, at Battle Cottage, Sydenham, S.E., the wife of Arthur Harry Beadles, M.R.C.S., L.R.C.P. Lond., of a son.

BUNDEY.—On Nov. 16th, at Honor Oak-park, the wife of H. Marchant Bundey, M.B., C.M. Edin., of a daughter.

HUDSON.—On Nov. 16th, at Vine House, Cobham, Surrey, the wife of Arthur B. Hudson, M.R.C.S., L.R.C.P. Lond., of a daughter.

PITT.—On Nov. 19th, at Portland-place, W., the wife of G. Newton Pitt, M.D. Camb., of a son.

SCOTT.—On Nov. 15th, at Shooters-hill-road, Blackheath, the wife of Patrick Cumin Scott, M.B. Cantab., of a son.

MARRIAGES.

ANDERSON—TURNELL.—On Nov. 5th, at St. Augustine's Church, Sheffield, Alexander Anderson, M.B., D.P.H., Wadsley-lane, Sheffield, to Florence Ida, second daughter of the late Samuel Turnell, Sheffield.

O'KEEFFE WILSON—LIGHT.—On Nov. 14th, at Christ Church, Seftonpark, Liverpool, George O'Keeffe Wilson, L.R.C.P., L.R.C.S. Irel., of Dublin, to Florence Gwendolen, eldest daughter of James Barclay Light, Liverpool.

DEATHS.

BEARDSLEY.—On Nov. 20th, at The Towers, Grange-over-Sands, Amos Beardsley, M.R.C.S. Eng., aged 78 years.

COCKLE.—On Nov. 14th, at The Lodge, West Molesey, John Cockle, M.D.

MACKAY.—On Nov. 20th, suddenly, at Learmonth-terrace, Edinburgh, George Mackay, M.D., Deputy Surgeon-General, Madras Army, retired, in his 81st year.

RIGGALL.—On Nov. 18th, at Elgin-crescent, W., Edward Riggall, M.R.C.S., aged 82.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

MEDICAL EVIDENCE AT CORONERS' INQUESTS.

WE have in these columns constantly called attention to the fact that the absence of medical evidence at coroners' inquests may endanger the course of justice. The want of a proper medical explanation of the cause of death may enable a criminal to escape justice or may leave some catastrophe unexplained to the detriment of the reputation of persons who have been in association with the deceased. Two examples have recently come before us where inquests have been conducted without medical evidence although medical evidence was clearly required and was for that matter tendered in a fashion by persons not in a position to give it properly.

The first case occurred at Aberford, near Leeds, and was an extraordinary case because the subject of the inquest, who had committed suicide, was only eight years old. He was at a private boarding school and had been admonished on the way home from church for an exhibition of temper. He was sent to his bedroom with his Bible to learn some verses and was shortly afterwards discovered hanging by a rope from the bedstead. Mr. J. H. Wigham, acting for Mr. T. B. Abbott of Aberford, was called in and pronounced life extinct. At the inquest, which was held at the school, it was elicited that the boy was weak in health and of a reserved disposition, being inclined to sulk when rebuked and preferring to play alone. His schoolmaster gave evidence as to the position in which he found the body hanging and the first-aid assistance which he administered. A woman who laid out the body deposed that there were no marks on the deceased with the exception of a blue one round his neck. The coroner in summing up pointed out that the schoolmaster's conduct was wise and exemplary. There was no evidence of bullying on the part of the unfortunate child's schoolfellows and the jury returned a verdict of "Suicide during a paroxysm of rage."

In the second case an inquiry was held upon a cabdriver who died from the effect of injuries received while driving a party in a landau from Dorchester to Portland. At the inquest it was elicited that during this drive the party had stopped at a public-house near Dorchester and at another, the Crown Hotel in Weymouth, where "they had a few drinks" according to the evidence of one of the party and where they stayed "a considerable time, perhaps three-quarters of an hour," according to an eye-witness. A short time after leaving the hotel at Weymouth the driver, a man named Spencer, fell over the side of the landau under the wheels, two of which passed over his chest. Four minutes later Mr. D. T. Key, of Wyke Regis, near Weymouth, arrived and saw at once that he had a bad case to deal with. The employer of the unfortunate man wanted to take charge of him, but this Mr. Key would not allow as he did not think the employer sober, and the crowd, who seemed to hold the same view, led the employer away. After a time some policemen arrived and Spencer was lifted into the landau and Mr. Key accompanied him to the Weymouth Hospital. But while he lay on the ground one of the men who had been in the carriage came back and kicked him, saying, "Get up, you lazy ——." Four or five days afterwards Spencer died in Weymouth Hospital, and at the necropsy he was found to have five broken ribs as well as injury to the lungs. Mr. Key was not called by the coroner to give evidence. The jury brought in a verdict of "Accidental death," the foreman adding that Spencer was not in a fit condition to drive.

In the first of the cases which we have related no public harm is done by the fact that proper medical evidence was not invited. No suspicion of injudicious treatment rests upon the schoolmaster or of bullying upon the victim's schoolfellows. But these things might very well have been otherwise. We have only the word of the woman called in to lay out the body in support of the fact that the deceased had no other injuries than a blue line round his neck. Clearly the medical man who was called to the case at once ought to have been asked to state the medical opinion that death occurred by hanging and to have given the medical testimony that the deceased had no other lesions. If such evidence was required at all it should have been given by the only person who was qualified to give it. In the second case the absence of medical evidence is more obviously wrong. The circumstances under which Spencer fell from his box do not appear to have been made clear, though we agree with the foreman of the jury that he was probably too drunk to be capable of driving. The tragedy occurred during election time. The landau appears to have contained a group of semi-drunken men who stopped at various public-houses and regaled themselves with champagne and beer and who sang songs and skylarked. One of the parties received injuries leading to his death, and from that time forward the most im ortant witness who could possibly be called was the medical man who appeared on the spot four minutes after the accident. He could have given the best evidence as to the condition of Spencer, as to the inebriety of the party, and as to the brutality of the person who kicked the injured man on the ground. From the time of his arrival on the scene Mr. Key took charge of the patient, saved him from his friends, and delivered him to the hospital. He alone could have made the story of the death of Spencer a clear one, while it is possible that his evidence might have led to the arrest and salutary punishment of a lot of drunken, brutal Hooligans. This is only a supposition, but there would be no just basis for such suppositions if proper medical evidence had been forthcoming at the inquest.

"HAVE MATERNAL IMPRESSIONS ANY EFFECT ON THE FŒTUS IN UTERO?"

To the Editors of THE LANCET.

SIRS,—Having read Dr. William Duncan's paper on the above subject in THE LANCET of Nov. 3rd (p. 1266), it has occurred to me that the following case which has come within my own experience may not be without some interest, and for this reason I beg leave to publish it in your columns, although it is only one of many similar cases which have from time to time been recorded. A boy, about nine years old, while playing with some friends at a large children's party ran headlong into a fence of barbed wire, with the result that his left cheek was torn open from the angle of the jaw to within an inch of the mouth, leaving a nasty gaping wound. A lady who was some months advanced in pregnancy was present and saw the child shortly after the accident, and was greatly horrified at his appearance. In due course she gave birth to a girl, and on the infant's left cheek was a nævus corresponding exactly in position and direction to the wound she had seen on the little boy's face. The girl is now grown up and still retains the birth-mark on her cheek, though it has faded somewhat with the lapse of time.

I am, Sirs, yours faithfully,

THOMAS J. T. MCHATTIE, M.B., Ch.B. Edin.

Holloway-road, N., Nov. 7th, 1900.

To the Editors of THE LANCET.

SIRS,—Having read the article under the above heading by Dr. Duncan in THE LANCET of Nov. 3rd (p. 1266), I think that the following cases may be interesting to those medical men who look upon such cases as more than mere coincidences. On March 26th, 1893, Mrs. X—— brought a little boy to me suffering from a simple fracture of the lower end of the left humerus, which had been caused by being run over by a bicycle. On Sept. 5th, 1893, Mrs. X—— was delivered of a fine male child with a so-called intra-uterine amputation of the left forearm an inch below the elbow and with rudimentary fingers. In August, 1890, I attended Mrs. Y——, a multipara whose preceding labours had been normal. On my entering the room she said that she was certain something was wrong because she had visited Barnum's show in London when a few weeks pregnant and she felt sure that seeing the "freaks" had affected the child. In about three hours I delivered her of an anencephalous monstrosity. How maternal impressions act I do not pretend to know, although it seems comprehensible that in the case of nævi a "nervous impression" might in some way disturb the arrangement of the blastodermic cells.

I am, Sirs, yours faithfully,

Grimsby, Nov. 12th, 1900. T. W. J. ALLEN, M.D. Durh.

AN AMERICAN ADVERTISEMENT.

IN a popular lecture given by a medical man some time ago he drew attention to an advertisement which at one time appeared on the inner cover of yellow-back railway novels, describing the advertiser's pills as "not fooling round like other pills" but doing their work at once. From an American medical magazine we print the following, which would make a good companion advertisement to that of the volatile pills:—

> "As a chaser after a Welsh Rabbit, I want nothing better than —— Tablets," says a prominent physician. They're good lobster chasers too—Try them yourself, Doctor.

Such advertisements in medical journals may be funny but they are not dignified.

"HOSPITAL ABUSE: A SIDE THAT IS SOMETIMES OVERLOOKED."

To the Editors of THE LANCET.

SIRS,—I have read with interest the letters of your correspondents on this subject in THE LANCET of Nov. 3rd (p. 1320) and 10th (p. 1396), and as a general practitioner of over 20 years' experience in several parts of London I am convinced that there is a great deal of truth on both sides of the question as enunciated by the letter of "Hospital Surgeon" and "A General Practitioner." The great and practical fact, however, remains that abuse of hospitals continues, both by members of the hospital staff in encouraging all sorts and conditions of patients to the injury of the general practitioner and by the general practitioner in sending to hospitals cases which he is either unwilling to take up himself or patients who could well afford to pay a consultant's fee. It is at present my lot to be in practice in the neighbourhood of the Docks, my practice almost entirely being not among the dock employés but with the skilled mechanics and labourers who are employed in the many large factories in this district. The practice in this neighbourhood was until a few years ago good for a working-class district and there was plenty of surgical work (in consequence of the numerous accidents in the factories), which was well paid for by the employers. Then a change came o'er the scene; a branch of the "Seaman's *Dreadnought* Hospital Society" was established at the Albert Dock, and will it be believed that although this was a hospital for seamen, women and children

were at once encouraged to attend the out-patient department from all the surrounding districts. No inquiries are made and no connexion with the sea is necessary. It is the common habit now for the men, women, and children of the mechanics here to flock to this hospital for every trivial complaint and the large firms send every accident that occurs there at once, and so the private practice of the district has been ruined by the unfair competition of this charity and, as I maintain, by the misapplication of the funds which, I presume, are subscribed for "seamen." The reason of this is not far to seek—viz., this, the large firms in the neighbourhood finding that it pays them better to subscribe to the hospital and send all their accidents there rather than to pay a private practitioner, the hospital as a *quid pro quo* throws open its doors to their employés as out-patients. When I say that among the mechanics here I am able on occasions to obtain fees of five, four, never less than three, guineas for the services of a consultant, it is evident that an indiscriminate and pauperising charity such as this is out of place in a district where even labourers can and do pay as much as from 8*s.* to 12*s.* a week rent. Personally I always make a point of feeing a consultant rather than sending the case for hospital advice when I consider a second opinion advisable, neither do I ever send cases to hospital which can be treated at home within the means of the patient and the capacity of the medical attendant; but in the face of the treatment meted out to us by the hospitals I ask what encouragement is there for general practitioners to do this? It is the reckless system of hospital abuse which is making the general practitioner regard the hospital physician and surgeon as his enemies and naturally, therefore, he not only becomes indifferent as to their welfare, but anxious to shift on to their shoulders the burden of those cases which are unremunerative or uninteresting to himself; and this state of things will continue until he can be brought to see that the consultant regards him as a man and a brother who has also "a right to live" and not to be regarded, as he so often is, as an ignorant person from whom every patient who applies for hospital relief has had a lucky escape.

A great deal has been made of the fact that in some of the large hospitals a special officer has been appointed for the purpose of making inquiries into the circumstances of the out-patients. I had occasion a short time since to make a personal investigation into this system at one of the largest London hospitals, and I found that although there certainly was such an officer the system of his inquiry amounted to this—that every applicant for relief was valued by him as being able to afford a certain sum from 1*d.* to 2*s.*, and was asked to contribute that to the hospital funds before being sent into the consulting-room. At a certain "special hospital" I know it to be even worse, for there every decently dressed person is requested to go to the private house of the consultant and to pay a reduced fee, and at this same hospital I know of a woman who has attended regularly for months once a week who pays the porter 2*s.* 6*d.* each time to be sent in early. These are by no means isolated cases. Many such, no doubt, come within the daily experience of every general practitioner and, I need scarcely add, do not tend to foster that *esprit de corps* without which there can be no remedy for the present lamentable state of affairs within the profession and through which we have become the prey not only of the public but even more of those who pull the strings of hospital charity.

I am, Sirs, your faithfully,

Nov. 12th, 1900. GENERAL PRACTITIONER.

THE CASE OF MR. JOSEPH HENDERSON MARTIN.

To the Editors of THE LANCET.

SIRS,—In addition to the £5 4*s.* 6*d.*, the receipt of which was acknowledged in THE LANCET of Nov. 17th, the following subscriptions have been since received by Dr. W. M. Renton and myself.

I am, Sirs, yours faithfully,

H. LYON SMITH.

The Hawthorns, Chester-le-Street, Nov. 21st, 1900.

	£	*s.*	*d.*		£	*s.*	*d.*
THE LANCET Relief Fund	10	0	0	Mr. Walter A. Satchell, J.P.	1	1	0
Sir Thomas Smith	3	0	0	Mr. J. Gidley-Moore ...	0	10	0
Mr. A. Thomas (Guildford)	1	1	0	"J. M."	1	0	0

"MOTOR-CARS FOR MEDICAL MEN."

To the Editors of THE LANCET.

SIRS,—In reply to your correspondent "Motor-car," in THE LANCET of Nov. 3rd (p. 1320), does he seriously mean that eight out of 10 motor-cars are in "hospital"? To begin with the statement is absurd, and the point is this—probably nine out of 10 so-called "breakdowns" of motors are due to the ignorance or carelessness of drivers. "Motor-car" says I have been very lucky; that may be, but I know other automobilists who have the same class of car, that is, Benz or International, who have had less trouble than I have had, because they either have an engineer or are better mechanics than I am; and conversely, the man who has no mechanical skill has much more trouble. In my practice three or four horses were always necessary and "Motor-car" knows, possibly, the trouble it used to be for evening or night visits to hunt up one's coachman and wait about while he harnessed his horse, growling the while at having "cleaned his harness," and so on. Has "Motor-car" never waited half an hour for his horse to be roughed? I have had quite enough of horses to last me the rest of my life. Shying, bolting, laminitis, influenza, nail driven wrong, are only a few of horse worries, let alone the "beggar goes and dies." I have driven about 12,000 miles in my car in two years, in all weathers over atrocious roads, at an inclusive cost of less than 2*d.* a mile. Can this be done with a horse and at the speed of a motor-car? Take one instance. I have had a morning and evening visit six miles from home, besides my other work, that is 24 miles. I took two hours to do it; with a horse and dog-cart it would take me three hours, thus, on two visits, a whole working hour is saved. Roughly this saving goes on every day. To my mind the comfort, saving, and convenience of a motor-car are beyond calculation. As to my worries with chains, tyres, and wheels, they have not troubled me at all since the first six months, when I had the first lot off. I confess nearly all my "roadside repairs" have been due to carelessness or want of experience in driving. "Motor-car" thinks £30 a year a "large order" for doing 6000 miles a year. How much would it cost him from first to last doing it with horses? I know very well!

I am, Sirs, yours faithfully,

Nov. 12th, 1900. BENZ CAR.

"NOTES ON AN OLD ENGLISH HOUSE."

WE have received under the above title a copy of an interesting sketch of the history of the old business of Messrs. Burgoyne, Burbidges, and Co., the well-known firm of wholesale and export druggists and manufacturers, of 12 and 16, Coleman-street, E.C. The business was founded as far back as 1741, and has therefore been in existence for over one and a half centuries. The sketch contains numerous illustrations of the laboratories and works and facsimiles are published of formulæ from the firm's oldest laboratory book, the date being 1742.

THE MEDICAL PROVIDENT LEAGUE.

WE have received many letters about this body. Space does not permit us to discuss the scheme at length this week. We recommend those who have written to us, and others, not to join the League, and will give our reasons in our next issue.

WHOLESALE DRUG HOUSES AND THE PUBLIC.

To the Editors of THE LANCET.

SIRS,—No doubt the profession as a whole will join with me in a growl, for oftentimes we can only hope to obtain what we require by indulging (of course in a nice way) in the process. The present grievance is against the wholesale drug houses in supplying retail to the public palatinoids, jelloids, and other up-to-date preparations. My chemist here tells me that ladies (especially) come constantly to him for such-and-such a preparation (giving name of house, number of drug, and retail price, &c.). Such a proceeding I do not consider at all correct and I feel sure no medical man will countenance it. The only remedy for us to adopt will be either to write prescriptions in Greek, German, or Arabic or not to prescribe in writing at all and to cease to get such drugs from the wholesale houses. Can any member of the profession make a better suggestion? I never use such expressions as "jelloids," "palatinoids," or any other 'oids to my patients; why should others cut their own throats by so doing? Besides, the system is dangerous from the public side of the question: one can get such a thing as an overdose, or "push" a drug too far. The present system of advertising new remedies in chemists' shops tends to reduce what is a purely scientific profession to the level of quackery.

I am, Sirs, yours faithfully,

Horsham, Nov. 6th, 1900. GEO. SELKIRK JONES.

"A WELL-KNOWN BONE-SETTER."

THE following paragraph is taken from the *North-Eastern Gazette*. It appeared on Nov. 15th and again in another local paper on Nov. 16th:—

"We are glad to hear that Mr. Pike Pease, M.P., is making satisfactory progress. His injured knee has been successfully treated by Mr. Clayton, the well-known bone-setter."

It is astonishing, as Mr. Crummles said, how these things get into the papers.

THE INTERMEDIATE EXAMINATION IN SCIENCE AT LONDON UNIVERSITY.

To the Editors of THE LANCET.

SIRS,—I shall feel greatly obliged if some of your readers can advise me through your columns as to the best books to read for the Intermediate Examination in Science at the University of London.

I am, Sirs, yours faithfully,

S. B. C.

"THE EXTRACTION OF TEETH FOR CLUB PATIENTS."

To the Editors of THE LANCET.

SIRS,—In reply to the letter under the above heading signed "Junior" in THE LANCET of Nov. 10th, p. 1396, I should like to tell your correspondent that it is *not* customary for medical officers of clubs to extract teeth gratuitously for members. I should advise him to continue to charge the usual 1*s.* for tooth extraction. Further, I should advise him not to be tempted to imitate the complaisance of his neighbouring medical brethren but to limit rather than to extend his contract work. I have always limited my club work by the literal meaning of the words "medical attendance and medicine" in the rules of clubs—that is to say, I give no pills, ointments, or liniments. When I commenced club work I scheduled certain things which would require extra fees, such as fractures, dislocations, operations,

burns and scalds, venereal diseases, &c. Twelve months afterwards a member refused to pay for attention to fractured fingers and as a matter of principle was involved I fought the case through three successive hearings at the county court, unaided by any defence union, and won a verdict. *En passant*, the judge supported an old contention of mine, that in unison with the duties I was appointed under the rules to fulfil, my proper title was not the antiquated one of "Surgeon," but "Medical Officer." The British workman is only too pleased to get as much as he can for his money and although he objects to be sweated himself he enjoys the process on other people. That is my experience of him after 15 years' professional work. "A labourer is worthy of his hire." Why not— A MEDICAL LABOURER?

Nov. 20th, 1900.

THE UNIVERSITY OF BIRMINGHAM MEDICAL DEGREE FOR PRACTITIONERS.

To the Editors of THE LANCET.

SIRS,—The recent regulation of the University of Birmingham, whereby registered practitioners who have studied at the School of Medicine there will be admitted to the M.B. examination, will be a very great boon to provincial practitioners.

Some others of us are apt to think that the favour is almost too great a one to bestow for the mere accident of localities and if the Senate of the University could extend the operation of the rule so as to include every registered practitioner who had passed the matriculation examination up to a certain date it would deal in a practical form with a widespread grievance and would ensure some degree of arts training in the graduates.—I am, Sirs, yours faithfully,

Dublin, Nov. 17th, 1900. J. C. MCWALTER, B.A., F.F.P.S. Glasg.

THE CASE OF DR. PATRICK QUINLIVAN.

IN our issue of last week we published an appeal from a committee formed to aid the family of the late Dr. Patrick Quinlivan. The honorary treasurer is Dr. R. Ambrose, M.P., The Mount, Whitechapel-road, E., to whom subscriptions may be sent, and the following subscriptions have been received:—

	£	s.	d.
Dr. R. F. Starkie	1	1	0
Mr. J. J. O'Donnell ...	2	2	0
Dr. E. L. McSheehy (Wimbledon)...	1	0	0
Mr. E. J. F. Moore... ...	1	1	0
Dr. W. R. Grandy	0	10	6
Dr. W. J. O'Meara	1	1	0
Dr. Thomas Neville ...	2	2	0
Dr. R. Ambrose, M.P. ...	3	3	0
Dr. W. Wynn Westcott...	1	1	0
Mr. P. Barragry	1	1	0
Dr. H. J. Gahagan ...	0	10	6
Mr. R. Movnahan	3	3	0
Mr. J. D. Ross	0	10	0
Mr. Jeremiah McCarthy	5	5	0
A Friend	0	2	6
Mr. P. B. Molony (Murroe, co. Limerick)	1	1	0
Mr. Mullane (Nottingham)	1	1	0
Mr. F. E. Rogers	3	3	0
Dr. W. Barter	1	1	0
Dr. R. Campbell	0	10	0
Mr. M. Cahill (Ellesmere)	1	1	0
Mr. Brooks	0	5	0
Dr. W. Cahill	1	1	0
A Friend	0	2	6
Mr. T. F. McDonnell (Hailsham)	1	1	0
Dr. J. O'Callaghan (Sheffield)	1	0	0
Dr. H. Macnaughton Jones	5	5	0
Mr. McCormack	0	10	0
Mr. Guthrie	1	1	0
Mr. B. O'Regan	1	1	0
Mr. F. W. Foott (Enfield Lock)	0	5	0
Sir Thomas Smith	3	3	0
R. D. P.	5	0	0
Dr. A. Holdsworth Davis (Sunderland)...	0	10	0
Dr. M. Poignand (Rowhedge)	1	1	0
Mr. P. G. Evans (Llwynarthan)	1	1	0
Dr. H. Greenwood (R.S.O., St. Just) ...	0	10	6
Mr. A. Mills (St. John's, S.E.)	0	5	0
Mr. P. J. Freyer	1	1	0
Dr. Daly (Gort, Ireland)	1	1	0
Dr. Staunton	0	10	6
Dr. Moore	0	10	6
Dr. O'Dwyer	0	10	6
Dr. Sullivan	0	10	6
Mr. J. F. O'Malley... ...	2	2	0
Mr. J. Kennedy	1	1	0
Mr. W. A. Satchel, J.P. (Ealing)	1	1	0
Mr. M. C. Corner	1	1	0
Mr. R. Roche	0	5	0
X. Y. Z.	1	1	0
Mr. S. Cole	0	10	0
Mr. Paul Terry (Gosport)	1	1	0
Mr. H. V. Eames (Nottingham)	1	1	0
Mr. C. Palmer (Burton-under-Needwood) ...	0	5	0
Mr. J. Sheehan	1	0	0
Mr. F. Arthur	1	0	0
Mr. J. Smyth (Leytonstone)	1	1	0
Mr. A. J. Ryan (Romford)...	1	1	0
Mr. J. S. Nolan	0	10	0
Mr. J. S. O'Sullivan (Liverpool)	0	10	0
Anonymous	0	10	0

"THE QUALIFIED QUACK."

To the Editors of THE LANCET.

SIRS,—If you refer to the Medical Register for 1900 you will find that John Harman Tarrant has neither the diploma of F.R.C.S. Edin. nor that of L.R.C.S. Edin. standing after his name. He was deprived of these qualifications, I believe, in December, 1899.

I am, Sirs, yours faithfully,

Lancaster, Nov. 16th, 1900. C. W. DEAN.

*** The proper action of the Royal College of Surgeons of Edinburgh had escaped our notice. It remains for the Royal College of Surgeons of Ireland to follow suit.—ED. L.

"UNUSUAL LAPSE OF TIME BETWEEN TWO PREGNANCIES."

To the Editors of THE LANCET.

SIRS—On May 12th (p. 1413), 19th (p. 1481), and 26th (p. 1566), 1900, three communications appeared in THE LANCET giving examples of long intervals between successive pregnancies. Perhaps the following parturition history of a woman whom I attended at her last confinement may prove interesting to some of your readers. She was born in February, 1850, and gave birth to four children as follows:—August, 1867; July, 1868; March 19th, 1870, and Dec. 13th, 1895. It will thus be seen that an interval of 25 years elapsed between her third confinement and her fourth conception, but the occurrence of the latter may possibly be explained by the fact that in February, 1895, she was in hospital for some weeks for the treatment of a urethral caruncle, from which, however, she denies that she ever experienced any inconvenience during coition.

I am, Sirs, yours faithfully,

Old Basford, Nottingham, Nov. 3rd, 1900. A. FULTON.

MIXED.

BEFORE the Middlesbrough stipendiary recently an applicant for an order exempting his infant from vaccination applied for "a separation order," much to the hilarity of the court.

AN OLD MEDICAL ACCOUNT.

WE are indebted to Mr. N. J. Highmore, of the Solicitor's Department of the Inland Revenue, for the following old medical account:—

1776. MRS. ELLEN HADDERTON.

March 24th. Dtr. to T. Jeffery.

	s.	d.
To three purging Potions	2	0
To a Cooling Collyrium	1	3
Ditto repeatd	1	3
Two Blystering Plasters and Dressings pr. Ditto ...	1	6
	£0	6

Receiv'd Apl. 27th, 1776, the above in full,

pr. T. Jeffery.

Isolation Hospital.—We do not know of any literature that bears on the subject. An isolation hospital of 60 beds can clearly be run for much less money than can two isolation hospitals of 30 beds each. The practical way of ascertaining the facts would be to write to one or two sanitary authorities having supervision over isolation hospitals of 30 and 60 beds, and ask the cost of maintenance.

C.—It is legitimate to give a reasonable amount of publicity to the change of residence in the manner suggested.

Enquirer, who has not chosen a very distinctive pseudonym, is recommended to consult her medical man.

J. W.—Yes.

ERRATUM.—In regard to the Bradshaw Lecture, THE LANCET, Nov. 10th, p. 1323, the figures for the analysis of urobilin should read thus:—C, 63·58; H, 7·84; N, 4·11; O, 24·47; total, 100·00.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 22nd, 1900.

Date	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb	Dry Bulb.	Remarks at 8.30 A.M.
Nov. 16	29·13	E.	0·05	52	49	44	45	46	Overcast
,, 17	29·64	N.	0·32	56	49	44	46	47	Raining
,, 18	30·11	N.E.	0·07	57	47	43	42	45	Cloudy
,, 19	30·29	N	...	69	46	40	39	41	Cloudy
,, 20	30·05	NNE	...	51	46	39	42	43	Overcast
,, 21	29·76	ENE	0·01	51	47	42	43	44	Overcast
,, 22	29·74	N.W.	...	51	46	44	43	44	Overcast

During the week marked copies of the following newspapers have been received: *Newcastle Daily Chronicle, Cheshire Daily Echo, Ayr Observer, Manchester Guardian, North British Daily Mail, Glasgow Herald, Nottingham Guardian, Scotsman, South Wales Daily News, Dundee Advertiser, Bradford Observer, Preston Herald, Birkenhead News, Birmingham Post, Times of India, Pic ucer Mail, Daylight, Pilot, Sunderland Morning Mail, West Sussex Gazette, Perth Constitutional, Norfolk Daily Standard, Huddersfield Examiner, Liverpool Daily Post, Citizen, Architect, Builder, Leeds Mercury, Bristol Mercury, Mining Journal, City Press, Yorkshire Post, Hertfordshire Mercury, Reading Mercury, Warder, Wiltshire Express, The World, Grimsby News, Blackpool Herald, Salisbury Times, Exeter Times, Stroud Journal, Australian Star, Banbury Guardian, West Cumberland Times, Surrey Advertiser, Eastern Post, Macclesfield Times, Local Government Chronicle, Sanitary Record, Nuneaton Chronicle, West Briton, Kent Messenger, Greenock Herald, The South Africa, Bury Free Press, Cambrian News, West Ham Guardian Daylight, Hereford Times, Civil Service Gazette, Rural World, Derby Courier, Court Journal, East London Observer, Kettering Guardian, Bridgend Chronicle, Local Government Journal, &c., &c.*

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (27th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

WEDNESDAY (28th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.)

THURSDAY (29th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.) University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

FRIDAY (30th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

SATURDAY (1st).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (26th).—SOCIETY OF ARTS.—8 P.M. Prof. J. A. Fleming: Electric Oscillations and Electric Waves. (Cantor Lecture.)

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (20, Hanover-square, W.).—7 P.M. Council Meeting. 8 P.M. Paper:—Mr. T. E. Constant: The Etiology of Superior Protrusion. Casual Communications:—Mr. C. V. Cotterell: (1) A Composite Odontome; (2) A Case of Inverted Eruption of a Tooth.—Mr. J. G. Turner: Pedunculated Epulis and Supernumerary Teeth.—Mr. Perry: The Microscopical Appearances of Teeth removed from a Graveyard. Lantern Display:—Mr. D. Gabell: Multi-coloured Sections of Teeth and other Histological Subjects.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. F. de Havilland Hall: The Diagnosis and Treatment of Thoracic Aneurysm. The following gentlemen are expected to take part in the discussion—Dr. Barlow, Dr. Beauchamp, Dr. O. Browne, Dr. K. Fowler, Dr. V. Harris, Dr. N. Moore, Dr. G. Smith, Mr. Sanderson (Brighton), and Dr. H. Walsham.

TUESDAY (27th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—Sir Thomas Smith: Suggestions for a possible Improvement in the Method of Removing Stones and Morbid Growths from the Interior of the Bladder.—Mr. W. G. Spencer: Median Perineal Urethrotomy and Cystotomy through a Superficial Tranverse Incision, after Celsus. Demonstration:—Dr. T. R. Bradshaw (Liverpool): An Undescribed Crystalline Urinary Deposit.

WEDNESDAY (28th).—HUNTERIAN SOCIETY (London Institution, Finsbury-circus).—8.30 P.M. Pathological Evening.

SOCIETY OF ARTS.—8 P.M. Major R. Ross: Malaria and Mosquitoes.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND (20, Hanover-square, W.).—4.30 P.M. Exhibition of Cases. 5 P.M. Meeting.

THURSDAY (29th).—CHILDHOOD SOCIETY (Library of the Sanitary Institute, 72, Margaret-street, W.).—8 P.M. Prof. C. S. Sherrington: Physiology for Teachers.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (26th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. R. Crocker: Consultation. (Skin.)

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Ball: Examination of the Throat, Nose, and Ear.

TUESDAY (27th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. S. Taylor: Consultation. (Medical.)

THE HOSPITAL FOR DISEASES OF THE SKIN (Stamford-street, Blackfriars).—5 P.M. Clinical Lecture:—Dr. P. S. Abraham: Vegetable Parasitic Diseases.

WEDNESDAY (28th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. W. B. Cheadle: Consultation. (Pædiatrics.) 5-7 P.M. Dr. H. Tilley: Class. Practical Rhinology and Laryngology.

LONDON THROAT HOSPITAL (204, Gt. Portland-street, W.).—5 P.M. Mr. E. B. Waggett: Diseases of Accessory Sinuses. (Post-graduate Course.)

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Wethered: Cardiac Dilatation.

THURSDAY (29th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. J. Hutchinson: Consultation. (Surgical.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Mr. Voelcker: Diphtheria.

CENTRAL LONDON THROAT, NOSE AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M. Dr. Holloway: Diagnosis and Treatment of some Diseases of the External Meatus.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Abraham: Some Skin Affections.

CHARING-CROSS HOSPITAL.—4 P.M. Mr. Wallis: Surgical Cases. (Post-graduate Course.)

FRIDAY (30th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. StClair Thomson: Consultation. (Throat.)

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